

International Federation of Clinical Chemistry and Laboratory Medicine

Advancing excellence in
laboratory medicine for
better healthcare worldwide

www.ifcc.org

Annual Report 2023



IFCC
International Federation
of Clinical Chemistry
and Laboratory Medicine

Highlights of the Year



WorldLab/EuroMedLab Congress – Rome (IT) May 21st - 25th , 2023

25th International Congress of Clinical Chemistry and Laboratory Medicine

25th European Congress of Clinical Chemistry and Laboratory Medicine

<https://storage.mzevents.it/programfinal.pdf>

Global MedLab Week celebrations – April 2023

<https://ifcc.org/ifcc-communications-publications-division-cpd/cpd-committees/public-relations-c-pr/happy-laboratory-professionals-week-2023/>

IFCC live webinars – 2023 Series (60 modules):

- POCT: Developing Community Resilience
- Metabolomics: Promises and Clinical Translation Challenges
- High sensitivity troponin point of care assays
- Recent updates on SARS-CoV-2 biology and diagnostics
- Nitrous oxide abuse: clinical consequences and biological markers related
- Laboratory Medicine and its challenges in low and middle income countries: redefining its leadership, impact
- of laboratory tests and advantages of a clinical laboratory 4.0
- Evidence-based laboratory medicine – systematic review and meta-analysis
- Active Learning Strategies in Clinical Chemistry and Laboratory Medicine
- Single-sample rule-out of NSTEMI-are we ready for prime time?
- Biomarqueurs sanguins diagnostiques du traumatisme crânien léger: actualités et perspectives
- Artificial intelligence applied to the Clinical Laboratory
- Publication Ethics: An overview from different perspectives
- Evidence-based Laboratory Medicine and inappropriate Laboratory Testing
- Challenges of digital technologies and artificial intelligence in laboratory medicine
- Laboratory medicine – a critical role for patients in disease diagnosis and monitoring
- Interference on high sensitivity troponin assays
- Expanding the use of emerging technologies in pediatrics
- Improved implementation of medical tests – a new quality improvement project for the laboratory
- Principles and practice of indirect methods for reference interval establishment
- Outcome studies to advance excellence in laboratory medicine
- R and D is good for you - a guide how to become researchers
- Increasing visibility of Laboratory Medicine through scientific communication and social media



New Working Groups formed:

- SD: Standardization of Fetal Haemoglobin (WG-HbF)
- ETD: Health Technologies Assessment (HTA) Core Model for Laboratory Medicine (WG-HTA)

The eJIFCC adopted Editorial Manager (EM)

The electronic Journal of the IFCC adopted Editorial Manager (EM) system for manuscripts in order to cope with the increasing number of submissions. Editorial Manager is a long-established and one of the best-known editorial submission and manuscript processing programme. The introduction of Editorial Manager, along with the use of Ithenticate, the most trusted plagiarism checker by the world's top researchers, publishers, and scholars, will increase eJIFCC reputation among the Scientific journals.

New IFCC Website:

IFCC launched its new and modernized website, a positive step towards improving IFCC's online presence and making it more user-friendly for its members and visitors, featuring improved navigation, faster load times, enhanced mobile responsiveness, better accessibility, and improved content organization. The new website provides a platform for disseminating information, promoting IFCC's activities, connecting with members and stakeholders, enhancing IFCC's brand reputation and digital presence, and providing a better user experience for its members and visitors. The IFCC thanks Insoft for their partnership and their support for many years and welcomes Digiwedo as our new partner for the new website.

IFCC-AACC Pearls, translation in Spanish

<https://eacademy.ifcc.org/topics/c%C3%A1psulas-de-la-medicina-de-laboratorio-pearls/>

e-Academy, open educational resources - <https://eacademy.ifcc.org/>

Adaptive Learning Program, open educational resources (<https://ifcc.org/ifcc-education-division/adaptive-learning-program/>)

IFCC Flow cytometry courses

- **2023 - 4th International Course on Basics of Flow Cytometry in Cairo (EG)**
<https://pub-180a8d00f517477ba49634e6b2b147e3.r2.dev/2023/11/4th-IFCC-Course-in-Egypt-on-Basics-of-Flow-Cytometry.pdf>
- **2023 - IFCC Workshop on "Flow cytometry - Basics to Immunomonitoring in Immunodeficiencies" in Jodhpur (IN)**
<https://pub-180a8d00f517477ba49634e6b2b147e3.r2.dev/2023/10/Flyer-Jodhpur-IN.pdf>

IFCC C-CMBC courses

- **2023 – 3rd Advanced Course in Molecular Diagnostic in Vilnius (LT)**

IFCC Expert Database - <http://www.ifcc.org/ifcc-education-division/experts/>

EMD & ETD Machine Learning Initiative

- Develop a guiding document on the utility of machine learning in laboratory medicine, Clin Chem 2023;69:690
- Presented a symposium at Euromedlab in Rome, 2023

IFCC Professional Scientific Programmes (PEP)

<https://ifcc.org/ifcc-education-division/pep-professional-exchange-programme/>

IFCC VLP programme supported by Abbott (<http://www.ifcc.org/ifcc-education-division/emd-special-projects/>)

Implement cooperation and agreements with **IFCC Regional Federations and International Organizations**

Roche / IFCC Scholarships granted for EuroMedLab and WorldLab Congresses

Young Scientists Forum – second edition held in Rome at the WorldLab Congress

https://ifcc.org/task-force-young-scientists-tf-ys/ystf_recentactivities/

IFCC Task Force on Global Lab Quality (TF-GLQ)

2nd Year EQA Pilot Program - involving 10 labs in 10 selected countries to participate in the 2nd - year pilot phase

IFCC FEN - Foundation for Emerging Nations (<http://www.ifccfoundation.org/>)

IFCC 2023 Distinguished Awards:

- **Dr Robert H. Christenson – US is the winners of the 2023 IFCC Henry Wishinsky Award for Distinguished International Services**, sponsored by Siemens.
- **Dr David S. HAGE (United States) is the winner of the 2023 IFCC Award for Distinguished Contributions in Education**, sponsored by Abbott Laboratories.
- **Dr Anne J. VASSAULT (France) is the winner of the 2023 IFCC-Robert Schaffer Award for Outstanding Achievements in the Development of Standards for Use in Laboratory Medicine**, co-sponsored by NIST and CLSI.
- **Dr Joe M. EL-KHOURY (United States) is the winner of the 2023 IFCC Young Investigator Award**, sponsored by Snibe.

IFCC Task Force on Outcome Studies in Laboratory Medicine (TF-OSLM): Call For Outcome Study Proposals 2023. View the winner: <https://ifccfiles.com/2024/01/TF-OSLM-selection-announcement.pdf>



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Message from the President of IFCC



IFCC President Message – 2023 Annual Report

The year 2023 was a period of profound progress and transformation for the IFCC. Amidst the dynamic landscape of global healthcare, IFCC remained committed to advancing the field of clinical chemistry and laboratory medicine through innovation, collaboration, and education. With a steadfast dedication to excellence, IFCC continued to play a pivotal role in shaping the future of diagnostic testing, patient care, and medical research worldwide.


IFCC Organization also continued to experience significant growth in its membership base. New applications were received from several new societies and countries seeking to become full or affiliate members, and we welcomed several new corporate members. As of end of 2023, there were 98 full-member national societies, 23 affiliate members, and 58 corporate members. This remarkable achievement breaks all previous records across all membership categories, underscoring the heightened visibility, influence, and global reach of the IFCC organization.

Throughout 2023, IFCC expanded its global outreach efforts, forging new partnerships and strengthening existing collaborations with leading healthcare organizations, academic institutions, and industry stakeholders. These partnerships facilitated knowledge exchange, resource sharing, and collaborative research initiatives aimed at addressing emerging challenges in clinical chemistry and laboratory medicine. A key focus has been on breaking silos by enhancing collaboration with all major bodies involved in laboratory medicine and in vitro diagnostics. We held discussions with several organizations to build stronger relationships that will ultimately foster innovation and minimize overlap/duplication in scientific and educational activities. New memorandums of understanding (MOU) were signed with EQALM (European Quality Assurance in Laboratory Medicine), BCLF (Balkan Clinical Laboratory Federation), WASPALM (World Association of Pathology and Laboratory Medicine), and the French community of laboratory medicine societies, FIFBCLM (francophone de biologie clinique et de médecine de laboratoire).

Another key achievement in 2023 was promoting the web presence of the IFCC organization and its affiliates, which will increase the visibility of IFCC within the clinical chemistry and laboratory medicine community as well as outside the field in the broader medical and healthcare community. After a decade, a new IFCC website was launched with a modernized look and feel as well as improved navigation and functionality. Other improvements include a major update and redevelopment of IFCC publications (the eNews and eJournal), creation of new databases, as well as new eAcademy website.

We were also thrilled to announce the formal launch of the new IFCC initiative on Laboratory Medicine Practice Guidelines. The IFCC Executive Board has granted approval for an innovative program aimed at encouraging IFCC functional units, including committees, taskforces, and working groups, to create and share best practice recommendations and guidelines across all facets of clinical laboratory medicine. This program is dedicated to facilitating the implementation of these recommendations in clinical laboratories worldwide. Under this program's umbrella, the IFCC will develop various types of guidance documents, encompassing best practice recommendations, position papers, and comprehensive evidence-based and graded practice guidelines. These documents will be made widely and freely available, serving as valuable resources for laboratory professionals. Their purpose is to provide guidance, establish standards, and promote best practices within the field of laboratory medicine. Undoubtedly, these resources will contribute significantly to enhancing the quality of laboratory practices worldwide, with a particular focus on benefiting developing countries. To oversee and drive this





program forward, an IFCC Taskforce on Laboratory Medicine Practice Guidelines (TF-LMPG) was formed following a nomination process in late 2023. This taskforce will serve as a steering group, providing program oversight, and will also act as a review panel to evaluate proposals submitted by various functional groups.

In 2023, IFCC continued to support scientific exchange and collaboration in clinical chemistry and laboratory medicine. The federation provided grants, professional exchange awards and scholarships to support regional federations, national societies and young scientists in many countries around the world. Additionally, IFCC facilitated collaboration between researchers, clinicians, and industry partners to accelerate the translation of research findings into clinical practice, ultimately improving patient outcomes and healthcare delivery.

The biggest IFCC event in 2023 was the WorldLab-EuroMedLab held in May in the beautiful city of Rome, hosted by SIBioC, the Italian Society of Clinical Chemistry and jointly organized by IFCC and the European Federation of Laboratory Medicine (EFLM). With over 11,500 attendees in person and over 1,900 participants online, it's clear that the event was a tremendous success and surpassed all previous records. Such a high level of attendance is a testament to the value and importance of the IFCC Congresses. The significant number of attendees, both in person and online, indicates a strong interest in the topics and discussions presented at the Rome Congress. This success not only reflects positively on the organizers and participants but also paves the way for future IFCC Congresses to continue growing and achieving even greater success. The Rome Congress has set a high bar for future events, and its accomplishments bode well for the ongoing success and impact of IFCC Congresses and demonstrates the growing significance of the congresses within the field and the valuable contributions they make to the scientific community.

Leading up to the WorldLab/EuroMedLab 2023, IFCC held its second-ever Young Scientists Forum, attended by over 200 young scientists from across Europe and around the world. This included recipients of 65 scholarships awarded by IFCC and EFLM to young scientists from developing countries attend this forum and the main congress. Excellent presentations were delivered by young scientists from around the globe, including Europe, Africa, Asia, the Middle East, North America, and Latin America. Given the success of this forum, IFCC plans to hold this event again at the next WorldLab Congress in Dubai in May 2024, providing opportunities for new young scientists to take part each year.

In conclusion, the year 2023 was a year of remarkable achievement and progress for the IFCC. Through its unwavering commitment to excellence, collaboration, and innovation, IFCC continued to advance the field of clinical chemistry and laboratory medicine, driving improvements in patient care, public health, and healthcare delivery worldwide. Looking ahead, IFCC remains poised to build upon its successes, tackle new challenges, and further strengthen its position as a global leader in the field of laboratory medicine

Prof. Khosrow Adeli



EXECUTIVE BOARD (EB)

The Executive Board (EB) was very productive in 2023, conducting five meetings (four in person and one virtual). The 164th EB meeting was held at the IFCC Office in Milan in February. The 165th EB meeting, in Rome in May, was held in conjunction with the WorldLab/EuroMedLab Congress. The 166th EB meeting, in Anaheim in July, was held in conjunction with the AACC/ADLM Congress. The 167th EB meeting, in Prague in October, was held in conjunction with the Czech Society of Clinical Biochemistry meeting. The 168th EB meeting, in December, was a virtual meeting. The incoming members of the 2024 EB were invited to attend the 167th and 168th EB meetings virtually in preparation for their time in office beginning on January 1, 2024. The minutes of all the EB meetings are available on the IFCC Website.

The IFCC Divisions, Committees, Working Groups and Task Forces have all resumed their in-person meetings in addition to now meeting regularly via virtual meetings, and the details of their activities are noted elsewhere in this Annual Report. All functional groups are expected to meet once per year in person and at least three times via virtual meetings. As I have noted in the past, the IFCC relies on the generous commitment of members from societies around the world who volunteer their time to serve on IFCC Committees, Working groups and Task forces. It is the dedicated efforts of the many volunteers that make the IFCC the successful organization that it is.

The IFCC membership continues to grow, and as of December 31, 2023, included 98 Full Members, 23 Affiliate Members and 59 Corporate Members. During 2023 three Full Member Societies joined: *Azerbaijan Society of Clinical Laboratory Specialists (ASCLS)*, *Association of Medical Laboratory Diagnostics Specialists (AMLDS) – Armenia*, and *Emirates Clinical Chemistry Society (ECCS) - United Arab Emirates*. One Affiliate Member Society joined: *Colegio Nacional de Químicos Clínicos en Medicina de Laboratorio (CONQUILAB) - Mexico*. We also welcomed five new Corporate Members: *i-SENS, Inc. (KR)*, *Labor Team (CH)*, *United Robotics Group GmbH (DE)*, *Brooks Automation Italy Srl (IT)*, *Controllab (BR)*. A warm welcome to all the new members joining the IFCC family.

2023 was the third and last year of my second term as Secretary for the IFCC Executive Board and I would like to thank all the IFCC officers, members, and colleagues who I have worked with for their cooperation and assistance over the last six years. It has been an honor and a privilege to serve the IFCC, and to have met and worked with so many colleagues around the world. I hope to see many of you at the 2024 WorldLab Congress in Dubai in May.

A sincere thank-you all my colleagues that I have served with on the Executive Board, with special thanks to the IFCC Office staff in Milan, Paola Bramati, Silvia Cardinale, Silvia Colli Lanzi, Smeralda Skenderaj, Elisa Fossati and Sofia Giardina who have worked so hard to keep our many activities moving forward.

David Kinniburgh - Executive Board Secretary

TREASURER'S ANNUAL REPORT

During the third and final year of my first term as the IFCC treasurer, until the end of March along with the efforts and help of IFCC staff the annual dues of Full, Affiliate and Corporate Members were received, the adherence of IFCC operating units to their allocated budgeted were monitored and detailed records of all transactions were kept, reimbursements were processed immediately after the receipt of the claims from the IFCC office. Close collaboration was achieved with the IFCC investment bank (Credit Suisse) to optimize the financial return on IFCC investments. The annual accounts and financial actions will be reviewed by our KPMG accountants in order to finalize the actual income and expenses at 31st December 2023. As of today, the final statements from KPMG are not finalized, so this report should be considered preliminary pending the KPMG final report.

1. COMPARISON OF 2023 PROPOSED BUDGETS WITH ACTUALS AT 31st DECEMBER 2023

For the first time, as approved by KPMG, we separated the actual budget from the sponsorships budget. The 2023 budget was expected to be closed with a surplus of CHF 313,420.00, but it was closed with a surplus of CHF 380,369.69.

Moreover, the sponsorships budget, with the previous year carryover expected to close with a surplus of CHF 99,108.28, but closed with a surplus of CHF 830,280.70 to be carried over to sponsorships budget of 2024 (Fig. 1).

IFCC Summary budget 2023

SUMMARY BUDGET	Proposal 2023	Actual 2023
Total Income	2,791,600.00	2,162,701.43
Total Expenses	2,478,180.00	1,782,331.74
Net Income	313 420.00	380,369.69

SPONSORSHIP BUDGET ONLY	Proposal 2022	Actual 2022
Total Income	174,115.00	185,890.58
Total Expenses	871,373.73	151,976.89
Yearly possible difference	-697,258.73	33,913.69
Balance with orevious vears carrv over	99,108.28	830,280.70

Carry over from previous years real	796,367.01	0.00
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Figure 1. 2023 proposed real and sponsorships budget versus to actual real and sponsorships at 31st December 2023.

2. TOTAL OPERATIONAL REVENUES AND FINANCIAL INCOME

The actual total operational revenues and financial income were CHF 2,348,592.01 as presented per category in comparison with the budgeted income in Fig.2.



IFCC INCOME 2023

REVENUES & INCOME 2023		Budget 2023	Actual 2023
02 04 00	Full members (National Societies)	175,000.00	161,021.95
03 04 00	Corporate members	250,000.00	417,850.8
04 04 00	Affiliate members	4,500.00	6,041.72
06 02 01	Income from CLSI royalties	2,000.00	504.96
06 38 01	Revenue ICHCLR for Secretariat support	4,500.00	3,795.20
07 02 25	EuroMedlab- Worldlab Rome 2023	2,200,000.00	1,458,600.00
07 02 26	Worldlab Dubai 2024	0.00	0.00
08 00 01	Income for Scientific Division (SD) Euro ean Comm (ex IRMM)	40,000.00	54,900.17
10 00 01	Elsevier support AACC	3,000.00	2,888.70
10 00 02	Income from Com. Publ. div. (CPD) Endorsement - including ADV	30,000.00	32,722.92
12 01 01	Yashra- Oist Clinical Chemist Award	10,000.00	0.00
12 01 02	Siemens - Hen Wishinsk Award dist Intl services	10,000.00	9,438.48
12 01 03	Abbott Award for dist. contribution in education	10,000.00	10,017.00
12 01 04	Abbott Award for significant contribution to molecular diagnostics	10,000.00	0.00
12 01 05	Award for lab Med and Patient care Snibe	0.00	0.00
12 01 06	NIST/CL SI Robert Schaffer Award	7,500.00	0.00
12 01 07	Young investor Award - IFCC - Snibe 2023	5,000.00	4,919.50
12 01 08	Hytest Award for contribution to cardiovascular diagnostic	10,000.00	0.00
12 01 09	Gerard Siest- Biological research Award	10,000.00	0.00
12 01 10	Yashraj Dist women scientist Award	10,000.00	0.00
15 05 02	Income from marketable securities	0.00	0.00
18 00 00	FEN expenses reimbursed	100.00	0.00
18 01 01	Bank interest received	0.00	0.00
18 01 02	Realised profits on sales of investments	0.00	0.00
18 01 03	Unrealized profits on investments	0.00	0.00
19 80 02	Overhead on sponsorship projects	0.00	0.00
20 01 03	Profits on exchange	0.00	0.00
TOTAL REVENUES & INCOME		2,791,600.00	2,162,701.43

PROJECTS' SPONSORSHIP ONLY - INCOME 2023		Budget 2023	Actual 2023
06 39 01	Revenue ICHCLR - subaccount	0.00	19,528.00
09 05 10 ex 09 02 10)	IFCC-AACC Pearls (EMO C-DL)	0.00	1,415.00
09 05 01	Abbott VLP sponsorship	0.00	11,700.00
09 05 04	Cardiac Biomarkers Committee - project sponsorship	0.00	0.00
09 05 14	C-POCT Satellite Rome surplus	8,046.62	0.00
13 05 21	Task Force Global elearning/eAcademy sponsorship	0.00	0.00
13 05 21	Income for (Roche) travel scholarships	0.00	0.00
07 05 26	Dubai registration fees	66,261.00	63,086.00
TOTAL SPONSORSHIP INCOME		174,115.00	185,890.58

Figure 2. The expected and actual INCOME at 31st December 2023.

Thanks all the member Societies and Corporate members that supported IFCC throughout the years. Their continuous contribution has made possible the accomplishment of numerous IFCC tasks and projects. IFCC is grateful to the IVD industry for their support and active participation in the IFCC scientific events and the endorsement of the new form of virtual events. We also thank all the members for their loyalty and attention in paying dues at the start of the year, which helps the cash flow.

Divisions and some Functional Units raise some sponsorships funds which give them a certain flexibility in conducting projects. These sponsorships are used for the specific projects in due time. The unspent sponsorship funds are carried over to the next years.

3. TOTAL OPERATIONAL COSTS AND FINANCIAL CHARGES

The actual total operational costs and financial charges in 2023 were CHF 1,934,308.63 as presented per category in comparison with the budgeted Expenses in Fig.3.

For AFCB Regional Federation due to situation in the Middle East and the default of Banks in Lebanon, where is their treasury, part of their unused 2022 budget was rolled over to their actual 2023 budget

Summary Expenses per category 2023	Budget 2023	Actual real expenses 2023
ional Federations yearly SUDDOrt (AFCC-AFCB-COLABIOCLI-APFCBJ)	112,000	70,667.62
EFLM EuroMedLab Congress share	750,000	343,875.00
International/Regional Organizations	53,680	101,067.98
C-CC (no sponsorship)	40,000	6,112.49
SD (no sponsorship)	161,000	64,980.98
EMD (no sponsorship)	125,000	62,838.45
CPD (no sponsorship)	124,000	241,090.28
ETD (no sponsorship)	61,000	45,464.73
Awards WorldLab Rome/Dubai	50,000	23,560.38
TFs	438,000	204,734.42
TF YS Forum Seoul	50,000	31,327.74
PSEP/PMEP programme	80,000	51,092.05
Swiss lawyers/Domicile/Auditor/bank expenses	42,000	29,288.20
Staff salaries/consultancy/rental	230,000	328,799.00
Consumable material/webmaster	40,000	33,103.00
Nominations/Treasurer	6,500	1,801.15
EB meetings/President expenses	115,000	135,779.55
Losses on exchanaes/depreciation bad debts	0.00	6,748.72
FEN	0.00	0.00
TOTAL	2,478,180	1,782,331.74

Summary Sponsorship only expenses budget 2023	Budget 2023	Actual real expenses 2023
Organization projects' sponsorship only	31,279.19	23,650.32
SD sponsorship only	202,839.86	13,319.53
EMD sponsorship C-CB	75,965.00	21,031.28
EMD sponsorship (Pearls-POCT satellite surplus)	11 192.00	0.00
CPD e-Academv	58,716.00	0.00



ETD Durban and Munich satellite meetings carry over surplus (Pediatric)	16,517.62	0.00
TF e-Learnina/e-Academv soonsorshio	102,346.00	29,928.00
Roche Scholarships proaramme	21,000.00	10,058.36
Abbott VLP proigramme	63 265.00	41 666.40
ICHCLR subaccount	213,246.34	12,323.00
TOTAL SPONSORSHIP EXPENSES	796,367.01	151,976.89

Figure 3. The expected and actual expenses per category at 31st December 2023.

4. TOTAL BALANCE AT CREDIT SUISSE ON 31 DECEMBER 2022

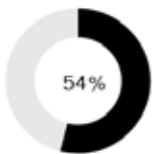
Total amount of cash available on December 31st, 2023, when converted into CHF currency was CHF 3,335,261.68 and total amount of our safekeeping accounts (investments) was CHF 6,922,395 as analyzed in the Table 1 and Figure 4

Currency	Total	Total in CHF
CHF	2,396,063.06	2,396,063.06
EUR	619,388.15	601,989.54
USD	369,129.57	337,209.08
XAU	0.00	0.00
Total		3,335,261.68

Table 1. Total Balance of cash by Currency at 31/12/2023



Value as of 31.12.2023
CHF 6,922,395



CHF 3,769,957

Portfolio Number

Investment Solution

Reference Currency

Credit Suisse Invest Partner

CHF 3,769,957



CHF 3,152,438

Portfolio Number

Reference Currency

CHF 3,152,438

Figure 4. Balance of safekeeping portfolios in CHF (market value) at 31/12/2023

5. IFCC INVESTMENTS AT CREDIT SUISSE

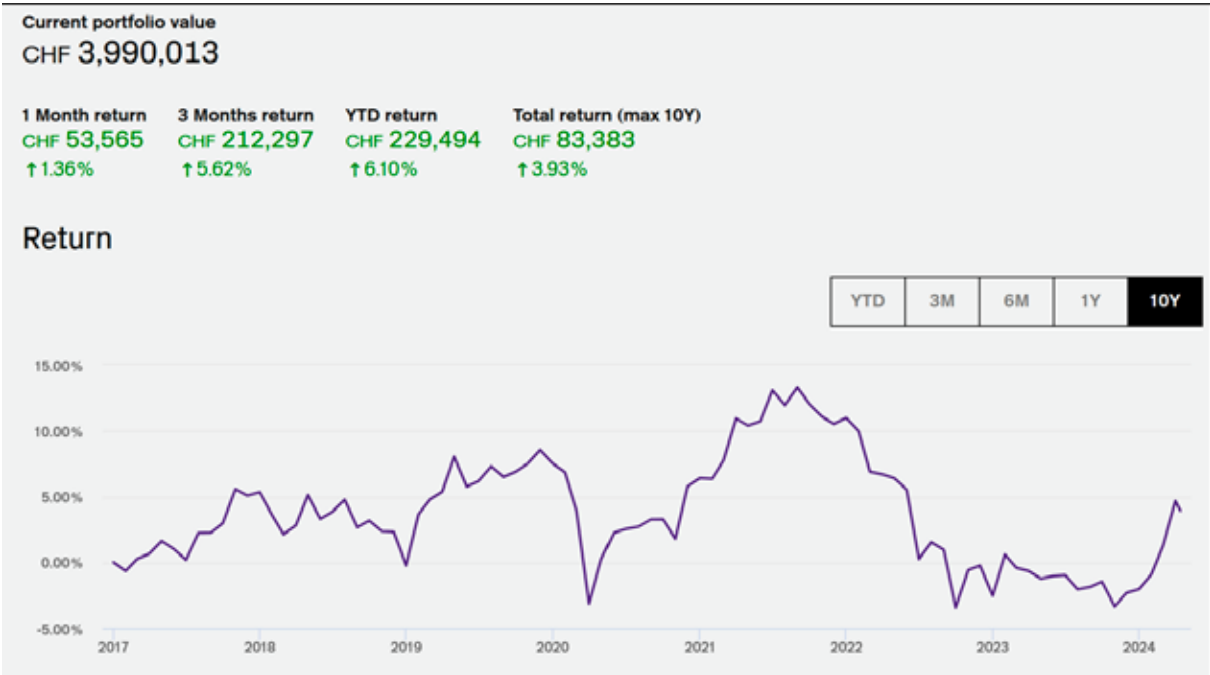


Figure 5. Return of IFCC investments between 2017 to 14.04.2024 was 3.93%

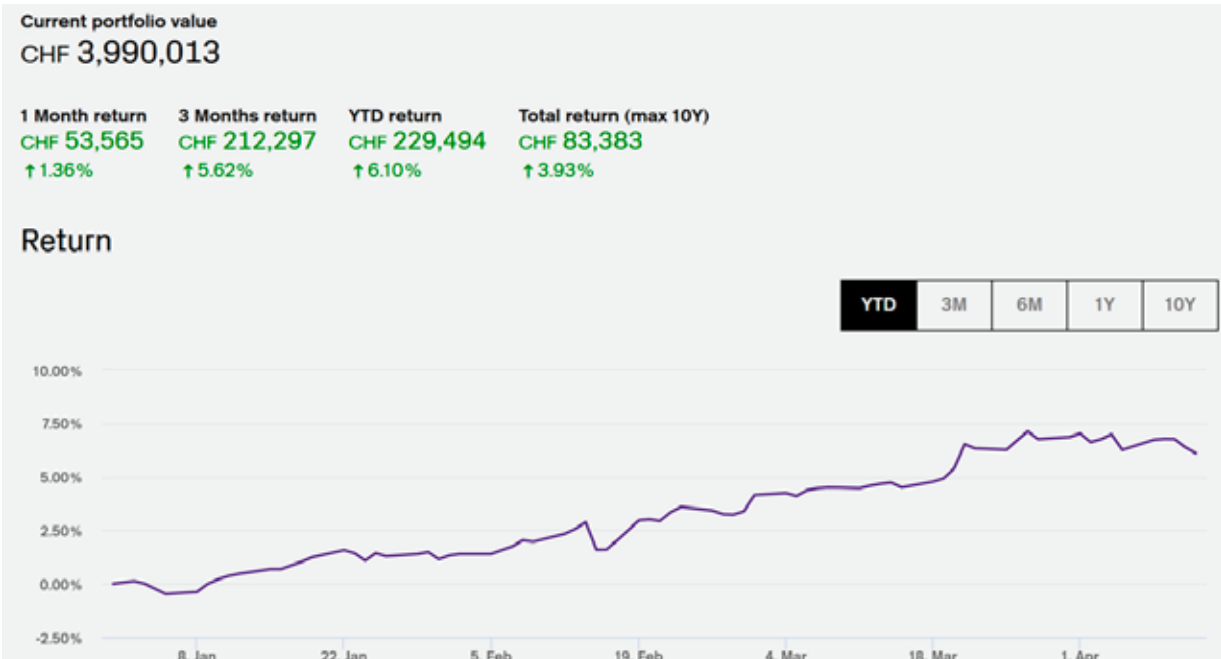


Figure 6. Return of IFCC investments between 01.01.2024 to 14.04.2024 was +6.10%



Figure 7: Detailed performance of IFCC investments between 01.01.2023 to 31.12.2023

The important issues of the agreement with Credit Swiss are outlined as below:

- Investment strategy: Income oriented
- Risk Profile: Moderate
- Risk Budget: Moderate
- Reporting currency: CHF (with investments in three currencies: CHF, EUR, USD)
- Ticket fee model: 0.20% for the safekeeping fee (no investment fee).

Alexander Haliassos, IFCC Treasurer

CORPORATE MEMBERS' REPORT

Joseph Passarelli (Roche)

Corporate Representative on the IFCC Executive Board (1st term Jan 2021 – Dec 2023)

In 2023 IFCC was pleased to welcome i-SENS, Inc. - Korea, United Robotics GmbH - Germany, Labor Team – Switzerland, Brooks Automation Italy srl and Controllab - Brazil as new Corporate Members. Regrettably, in 2023 the following Corporate Members left IFCC: Megalab, JSC – Georgia and Labtronic - Kazakhstan. By the end of 2023, the total number of IFCC's Corporate Members was 59, an increase of 3 companies from the previous year.

Interest in new IFCC Corporate Membership comes mainly from China (10 Corporate Members, followed by UK and Italy 7 Corporate Members, Germany and Japan 6 Corporate Members, USA, 5 Corporate Members, Finland 4 Corporate Members and France 3 Corporate Members each). Not all IFCC Corporate Members are manufacturers but several are distributors. In 2023, Corporate Members contributed with annual fees of ~392.000 CHF to approximately 56% of IFCC's total direct annual income from its members (which comprise National Societies and Affiliate Member Societies as well). On top of this, IFCC received sponsorship for scientific or educational projects, awards, travel of students and lecturers, and congresses (e.g. contribution to EuroMedLab - Rome 2023 was over 1 m CHF).

To enhance corporate membership, the Task Force Corporate Members (TF-CM), continues to be very active under the leadership of the chair, Tricia Ravalico – Abbott. At the end of 2023, in addition to its 7 full members, the TF had 7 active corresponding members, representing 14 companies in total. The TF-CM is reported separately but in brief, it was established to ensure that Corporate Members' interests are better addressed within IFCC (i.e. better representation of Corporate Members, more efficient discussion among Corporate Members, identification of common topics and interaction with the direct report to the IFCC Executive Board) and to

increase the engagement of Corporate Members in IFCC since many Corporate Members are not actively involved in IFCC activities. (See the respective website for details of the Task Force.)

The Corporate Members make additional important contributions to IFCC activities: Numerous delegates from Corporate Members are actively engaged in most of the Task Forces, Committees, and Working Groups in all IFCC divisions and in their Executive Committees, either as full members or as corresponding members, as well as in the Congresses & Conferences Committee.

The following are the contact information for Corporate Representatives who were / are members of the Executive Committees of IFCC's 4 divisions and the Congresses & Conferences Committee. Please feel free to reach out to them in case you have questions:

- **Scientific Division:**
Christian Vogl (Roche) (1st term Mar 2023-2025)
- **Emerging Technologies Division:**
This division has two Corporate Representatives: Markus Roessler (Roche) (2nd term 2021-2023), and Yan Liu (Mindray Medical International Corporation) (1st term 2023-2025) Markus' term ended in December 2023 and a new corporate representative will be appointed in early 2024.
- **Education & Management Division:**
André Ziegler (Roche) (2nd term 2021-2023)
Andre's term ended in December 2023 and a new corporate representative will be appointed in early 2024.
- **Communications & Publications Division:**
Tricia Ravalico (Abbott) (2nd term 2021-2023)
Tricia's term ended in December 2023 and a new corporate representative will be appointed in early 2024.
- **Congresses & Conferences Committee:**
Cheryl Jackson (Beckman Coulter) 2nd term 2021-2023)
Cheryl's term ended in December 2023 and a new corporate representative will be appointed in early 2024.

The following persons were / are Corporate Members of the respective Congress Organizing Committees (COCs):

- **IFCC-EFLM EuroMedLab 2023, Rome, Italy:**
Angel de la Fuente (Roche); May 21 - 25 2023
- **IFCC / WorldLab 2024, Dubai, United Arab Emirates:**
Vincent Chen (Snibe) and Angel de la Fuente (Roche); May 26 - 30 2024
- **IFCC-EFLM EuroMedLab 2025, Brussels, Belgium:**
Abir Alhelou (Abbott); May 18 - 22 2024

Publications by Corporate Members in the IFCC eNews:

To better communicate the activities of IVD manufacturers and the contributions by IFCC corporate members, two articles were published in the IFCC eNews, coordinated by the Task Force – Corporate Members:

1. IVD best practice for maximizing value with the IFCC – Joe Passarelli (Roche), July/August edition
2. Investigator Initiated Studies: An Opportunity for Collaboration with Industry - Jean-Sébastien Blanchet (Beckman Coulter), Nadav Kaufman, (QuidelOrtho) and Anne Skurup, (Radiometer Medical, ApS), October edition

Additional articles will be published in 2024.

The next Corporate Members' Meetings will be held in conjunction with the IFCC WorldLab 2024 in Dubai, likely on Monday, May 27. I would like to encourage all corporate members to take part in the meeting. The respective meeting details will be communicated later.

Finally, I want to sincerely thank all Corporate Members and all IFCC officers for the engaged and constructive support that I have received. Special thanks goes to all those that actively participating on the Task Force – Corporate Members. I am especially grateful to Tricia Ravalico who served as chair of the Task Force – Corporate Members and wish her all the best as she succeeds me on the Executive Board with her first term starting in January 2024.

Joseph Passarelli, Corporate Member Representative



COMMITTEE ON CONGRESSES AND CONFERENCES (C-CC)

CHAIR & MEMBERSHIP/TERMS OF OFFICE

P. Laitinen	Chair	FI	1st	2021 01 - 2023 12
M. Blanes Gonzales	Member	PY	2nd	2021 01 - 2023 12
A. Buño Soto	Member	ES	1st	2021 01 - 2023 12
W.H. Fang	Member	TW	1st	2023 01 - 2025 12
V. Palicka	Member	CZ	1st	2023 01 - 2025 12
C. Jackson	Corporate Member	US	2nd	2021 01 - 2023 12

TERMS OF REFERENCE

Reporting instructions for Terms of Reference for all Committees, Taskforces and Working Groups, please provide the following information

Term of reference 1

ICCCLM (WorldLab) applications to host - Call for applications and then the evaluation and scoring of the applications and submitting a recommendation to the EB in regard to the best overall application.

List 2022 accomplishments for this Term of Reference

A call for applications to host WorldLab 2026 was sent out on Jan30, 2023 with a deadline of Apr 30, 2023. By the deadline, only one bid was received (India) for which reason the deadline was extended to May 31, 2023. By that deadline a second bid (Malesia) was received. After many discussions on the bids, Malesian bid was withdrawn. Thus C-CC evaluated and scored the bid from India. There was a noticeable scatter of scores between C-CC members.

	<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>	<u>E</u>	<u>F</u>	<u>G</u>	<u>H</u>	<u>I</u>
I. Participation:	10	7	10	15	25	23	9	17	20
II. Convention Centre Facility:	24	38	34	35	40	39	35	40	40
III. Location and Accommodations:	17	26	18	30	35	31	29	24	25
GRAND TOTAL	51	71	62	80	100	93	73	81	85

C-CC sent the scores to EB with several comments and expressed concern on issues like free access to all scientists (VISA mandatory for several countries), mandatory vaccinations requirement, safety of the location, heavy traffic and pollution.

EB decided to grant WorldLab 2026 to New Delhi, India.

List planned activities in 2024 for this Term of Reference

A call for EuroMedLab 2027 will be sent out in 2024.



Term of reference 2

The C-CC will review all meeting guidelines every three years to ensure their continued applicability, and will write new guidelines for those meetings not covered by the existing procedures.

List 2023 accomplishments for this Term of Reference

C-CC reviewed and updated the following guidelines during 2023:

1. Guideline for IFCC auspices
2. IFCC Auspices application form
3. GUIDELINES FOR THE ORGANIZATION OF A SATELLITE MEETING TO AN IFCC-SPONSORED CONGRESS OR CONFERENCE
4. GUIDELINES FOR PREPARATION OF THE SCIENTIFIC PROGRAMME FOR AN IFCC INTERNATIONAL CONGRESS OF CLINICAL CHEMISTRY AND LABORATORY MEDICINE (ICCCLM, WorldLab)
5. Scientific Programme Guidelines for an IFCC-EFLM EuroMedLab_June 2023

These updated guidelines were sent to EB for evaluation and decision on July 20, 2023. Final approval of the updated guidelines still pending.

EB updated the following guidelines in April 2023:

WorldLab Guidelines (2021-2030)_rev.6_April2023

EuroMedLab Guidelines Update.(2023-2029)_rev17_April2023.docx

List planned activities in 2024 for this Term of Reference

Waiting for the final EB approval of the updated guidelines. C-CC will make the possible corrections suggested by EB.

Term of reference 3

The C-CC will promote and support Clinical Chemistry and Laboratory Medicine through congresses, conferences, symposia, webinars, master discussions, and other professional meetings. The IFCC is greatly interested in supporting the success of high quality scientific/educational events that will contribute to the awareness and appreciation of Laboratory Medicine and its contribution to the delivery of appropriate health care.

The granting of IFCC Auspices and the involvement of the IFCC in high quality scientific/educational events enhances the field of Laboratory Medicine and the reputation of the IFCC.

List 2023 accomplishments for this Term of Reference

IFCC Auspices were granted to 90 events of Laboratory Medicine. 52 applications were received from National Societies or Regional Societies and 38 applications were received from companies, mainly Snibe.

List planned activities in 2024 for this Term of Reference

C-CC will continue granting auspices to congresses, conferences, webinars, symposia and training events.

Term of reference 4

The EB in collaboration with C-CC will make a written agreement with each meeting organizing committee to define the working relationship with the IFCC and the financial details, and will appoint a liaison from the C-CC to interact with the organizing committee.

The C-CC will maintain open and continuous communications with other IFCC units regarding the planning of meetings, and will promote the inclusion of IFCC functional units and experts in the programmes of these meetings.

List 2023 accomplishments for this Term of Reference

C-CC Chair Päivi Laitinen was appointed a member of the COC of WorldLab Dubai 2024. She was also a member of COC of Rome WorldLab 2023. She attended all meetings either in person or via Zoom.

Antonio Buño Soto was appointed a member of COC of EuroMedLab Brussels 2025. He has attended COC meetings in Brussels.

C-CC has sent a request for proposals of IFCC symposia in Regional Congresses to IFCC EB, Divisions, Committees, Working Groups and Task Forces. C-CC has sent these symposia proposals to COLABIOCLI and AFCC congresses to the Organizing Committees of congresses for final decision.

List planned activities in 2024 for this Term of Reference

A C-CC member for the WorldLab New Delhi 2026 has to be appointed.

A call for IFCC sponsored symposia for EuroMedLab Brussels 2025 will be sent to IFCC Divisions, Committees, Working Groups, Task Forces in 2024.

4. ADDITIONAL INFORMATION

A term of Full Member Montserrat Blanes Gonzales and Corporate Member Cheryl Jackson ended on Dec 31, 2023. A call for new members was sent out on Oct 5, 2023 with a deadline of Nov 20, 2023. 7 nominations were received for a Full Member position and 4 nominations for the Corporate Member position. C-CC members eligible (not candidates) evaluated and scored the nominees. The scoring with a recommendation was sent to EB on Dec 12, 2023 for final decision.

5. 2023 MEETINGS / CONFERENCE CALLS HELD (VIRTUAL & IN PERSON)

A C-CC meeting was held in connection to WorldLab Rome 2023. The meeting was held on May 24, 2023. All Full Members and 7 Corresponding Members attended the meeting. Corporate Member did not attend.

6. MEETING SCHEDULE IN 2024

A C-CC meeting will be held in connection to WorldLab Dubai 2024 on May 27, 2024.



SCIENTIFIC DIVISION (SD)

During 2023, the following members served on the SD Executive Committee:

Christa COBBAERT (NL)	Chair
Konstantinos MAKRIS (GR)	Vice-Chair
Garry JOHN (UK)	Secretary
Barnali DAS (IN)	Member
Vincent DELATOUR (FR)	Member
Hubert VESPER (US)	Member
Saara WITTFORTH	Member/Junior

Invited Representatives of International Organizations:

Christian VOGL (DE)	Corporate Rep.
Ralph D. JOSEPHS (FR)	BIPM Observer
Liesbet DEPREZ (BE)	EU Comm./JRC Observer
Ian YOUNG (UK)	ICHCLR Observer
Greg MILLER (US)	JCTLM Chair / SD Cons.
Chris BURNS (UK)	NIBSC Consultant
Yang ZHEN (CN)	NIFDC Observer
Karen PHINNEY (US)	NIST Consultant

Relationship with International Organizations

The SD continues to pursue the expansion of its activities to collaborate with international organizations to promote the implementation of the concept of traceability in laboratory medicine and the implementation of reference measurement systems.

No reports have been submitted on relationships with international organizations. Information given in this report is drawn from SD-EC minutes.

Bureau International des Poids et Mesures (BIPM)

In protein analysis working group the work has continued with PTH 1284 RM. For cyclosporine A, a collaborator has been found for the study. Work is ongoing with estradiol RM and nucleic acid working group is conducting a SARS-CoV-2 RNA copy number RM study.

A task group on pandemic response is planning a “fire drill” exercise as a pilot study for rapid response with nucleic acid testing for an unknown target. Similar fire drill is possibly coming also for protein analysis.

Joint Committee on Traceability in Laboratory Medicine (JCTLM)

A new website has been released - jctlm.org/

Within JCTLM there are two new task groups: Strategy TG and Knowledge TG

The aims of the Strategy TG are to launch an increased visibility campaign,

to increase awareness by regulators and to expand membership categories (an opportunity to offer support to the JCTLM functions by various stakeholders through membership fees).

Also a member survey has been conducted regarding the role and unmet needs that JCTLM could address.

The Knowledge transfer TG has created a check list for JCTLM submissions which has been reviewed by SD and will be approved by the JCTLM EC in December.

The check list was created by checking to problems of the non-conforming submissions within the last 4 years. Another aim of the WG is to develop e-learning modules which would give advice on how to make JCTLM submissions for RM and RMP. Contribution from members of IFCC SD EC and functional units is desired.

JCTLM Working Group on Traceability, Education and Promotion (JCTLM-TEPWG) promotes JCTLM by providing education on traceability and organizing workshops. Volunteers required for the actions.

JCTLM Database has received funding from IVD and NMIs to automate the submission and review process. Database expansion is expected to come out in early 2025. New ISO standards 15193 and 15194 are expected in October 2024 and will be incorporated in the new automated process.

For JCTLM listing reference laboratories must be accredited as reference laboratories and show successful participation in interlaboratory evaluations. However, accreditation should be discussed - how requirements are met by the laboratories and how this should be documented. Also, the reference laboratories have to show successful participation in interlaboratory participation every three years. Also it should be better defined how to evaluate successful participation or rather successful performance in interlaboratory evaluations.

2023 JCTLM Workshop on 'EQA schemes elucidating the clinical suitability of laboratory results', 4 and 5 December 2023, BIPM, Sèvres, France

www.bipm.org/en/committees/jc/jctlm/wg/jctlm/2023-12-04

Joint Research Center (JRC)

Status report on the CRM projects of the JRC in collaboration with the IFCC (October 2022).

1. CRMs for auto immune disorders [IFCC Committee on Harmonization of Autoimmune Tests (C-HAT)]
 - 1.1. CRM for IgG and IgA anti tissue transglutaminase (anti-tTG) (Coeliac disease):
EURM-487/IFCC Agreement has been signed with MHRA and part of the batch was transferred to them as candidate for the new WHO International Standard for anti tTG IgG and IgA antibodies. The plan is to assign arbitrary units in IU/mL .
The final commutability study is ongoing in which the calibration effectiveness of the EURM-487/IFCC will be assessed for 8 assays for anti-tTG IgA and 7 assays for anti-tTG IgG.
 - 1.2. IgG anti-GBM (Anti-glomerular basement membrane disease):
ERM-DA484/IFCC Draft paper on the commutability study of the pilot batches under preparation. Most suitable starting material was selected and delivered to JRC.
Processing will be done in the upcoming months.
2. CRMs for CSF proteins [IFCC Working Group on Biomarkers of Neurodegenerative Diseases (WG-CSF)]
 - 2.1. CRM for A β 1-40 in CSF: ERM-DA480/IFCC, ERM-DA481/IFCC, ERM-DA482/IFCC
The conducted questionnaire with the IVD manufacturers has shown that the concentration range of A β 1-40 in the current CRM materials (certified for A β 1-40 is too narrow (4.8 - 6 μ g/L vs clinical assays 0.5 - 30 μ g/L). JRC are exploring the possibility to certify A β 1-40 in new CSF preparations. In the meantime, the LC-MS method from UPenn for A β 1-40 has been accepted by JCTLM. The AAA value

assigned calibrant for A β 1-40 by LNE, LGC and JRC can be used for calibration in the accepted JCTLM method.

2.2. Development of CRM for Neurofilament light (NfL) in serum

JRC has joined the NEuroBioStand project, which is led by LNE and will continue 3 years. JRC will support the project in by developing prototype reference materials for NfL. On the WG-BND meeting in August, LGC has presented a LC-MS method for quantification of NfL in CSF. The method range is not sufficient to measure directly the lower serum values but JRC can investigate alternative value assignment approaches in which a CSF solution with assigned value is spiked in to serum under highly controlled conditions.

3. CRMs for Haemoglobin A2 [IFCC Working Group on Standardisation of Haemoglobin A2 (WG-HbA2)]: ERM-DA485/IFCC and ERM-DA486/IFCC

The characterisation study is on-going at the two reference laboratories together with commutability measurements with the reference method. Results are expected by the end of November. Finalisation of the project is planned for beginning of 2024.

4. CRMs for apolipoproteins [IFCC Working Group on apolipoproteins by Mass Spectrometry (WG-APO MS)]

A commutability study regarding Apolipoprotein A1 (ApoA1) and Apolipoprotein B (ApoB) is ongoing. In this study a number candidate reference material and clinical samples are measured together in order to select a suitable format for the production of a final reference material batch for these two apolipoproteins. In addition, the study aims to investigate the agreement between current ApoA1 and ApoB IVD assays. Measurements are carried out with 9 routine methods for Apo A1 and ApoB as well as a LC-MS-based candidate reference method. Data collection is ongoing and a final outcome is expected by the end of 2023.

5. CRMs for enzymes [IFCC working Group on Pancreatic Enzymes (WG-PE)]

5.1. CRM for the catalytic activity of alkaline phosphatase (ALP)

A new CRM for ALP is being developed. A commutability study with three pilot batches has been performed and the results show that a candidate RM for ALP in an artificial matrix can be commutable for the combination of the RMP and several IVD-MPs. In addition, the origin of the ALP material (i.e. human recombinant from mammalian cells or purified from human tissue) has not shown to be a critical factor for its commutability. We have decided to select a material based on a recombinant form of human ALP, as this material is easier to reproduce reliably. The composition of the new ALP CRM will be selected based on his commutability profile and on some additional preparation factors affecting the final quality and the fitness for purpose of the CRM.

The procurement procedure for the ALP material is ongoing.

5.2. CRM for the catalytic activity of aspartate aminotransferase (AST)

The most suitable AST material has been selected, prepared and recently delivered to JRC. We are in the initial phases of the certification procedure.

6. CRM for Estradiol in human serum

Development of three CRMs (ERM-DA576, 577 and 578) for the replacement of the BCR materials (exhausted or close to) is on-going. Preliminary feasibility (for the matrix form) and commutability studies performed and evaluated. The candidate RMs have been shown commutable for the RMP (LC-MS/MS) and three IVD-MPs. The final batch of the candidate RMs will be prepared in a frozen form, and the high level material will be spiked. Production of the candidate RMs (starting serum material is already present in-house) is foreseen end 2023-begin 2024.



National Institute of Standards and Technology (NIST)

This update reflects changes within the past 12 months.

Specific projects relevant to the IFCC Scientific Division include:

RM 8121 Cardiac Troponin I in Frozen Human Plasma: This is a four-level material prepared by blending and pooling serum samples with high cTnI levels with normal plasma. Target cTnI concentrations for the pools were developed in consultation with IVD manufacturers and the IFCC WG-TNI. Planning of homogeneity and commutability studies is underway.

SRM 2921a Human Cardiac Troponin Complex: This is a replacement material for SRM 2921 which is out of stock. We expect that the new material will be very similar to the previous one. Release of SRM 2921a is anticipated by the end of 2023.

SRM 3666 Albumin and Creatinine in Frozen Human Urine: This is a four-level material with naturally occurring concentrations of albumin and creatinine. Specifications for the SRM were developed in consultation with the WG-SAU. This material is now available, but sales are being limited until a commutability study is completed. A comparison of candidate reference measurement procedures (RMPs) for urine albumin (Mayo Clinic, University of Minnesota, NIST, and HSA Singapore) is in progress. Nomination of the SRM and the RMPs to the JCTLM database is planned.

Additional status information on RM/SRM projects that may be of interest is included in the table.

Analyte	NIST Identifier	Release Date	Description
Glucose in Frozen Human Serum	SRM 965c	Mid 2024	<ul style="list-style-type: none"> • Renewal material • Material acquisition complete • Certification measurements in progress
Creatinine in Frozen Human Serum	SRM 967b	Late 2023	<ul style="list-style-type: none"> • Renewal material • Certification process completed
Bovine Serum Albumin (7% solution)	SRM 927g	Early 2024	<ul style="list-style-type: none"> • Renewal of SRM 927f • Certification measurements in progress
Human Cardiac Troponin Complex	SRM 2921a	Late 2023	<ul style="list-style-type: none"> • Renewal of SRM 2921
Albumin and Creatinine in Frozen Human Urine	SRM 3666	2023	<ul style="list-style-type: none"> • Commutability study planned
Homocysteine in Frozen Human Serum	SRM 1955a	2024	<ul style="list-style-type: none"> • Renewal material • Certification process completed
Cardiac Troponin I in Frozen Human Plasma	RM 8121	2023/2024	<ul style="list-style-type: none"> • Material acquisition complete
Electrolytes in Frozen Human Serum	SRM 956e	Mid 2024	<ul style="list-style-type: none"> • Renewal of SRM 956d • Certification measurements in progress
Glucose	SRM 917d	January 2023	<ul style="list-style-type: none"> • Renewal of SRM 917c
Tripalmitin	SRM 1595a	Early 2024	<ul style="list-style-type: none"> • Renewal of SRM 1595
Frozen Human Serum	SRM 909d	Late 2026	<ul style="list-style-type: none"> • Material acquisition planned in 2024
Metabolites in Frozen Human Plasma	SRM 1950a	Late 2026	<ul style="list-style-type: none"> • Material acquisition planned in 2024



Analyte	NIST Identifier	Release Date	Description
BK Virus Quantitative (DNA construct in buffer)	SRM 2365	Late 2023	<ul style="list-style-type: none">Recertification measurement completed in 2023
JC Virus Quantitative (DNA construct in buffer)	SRM 2367	2022	<ul style="list-style-type: none">Released in 2022

The International Consortium for Harmonization of Clinical Laboratory Results (ICHCLR)

ICHCLR will continue to work independently but in close collaboration with IFCC SD. The committee will focus on measurands according to medical / clinical need and ensuring measurands are kept up to date by review.

ICHCLR are looking to funding investigation of non-harmonised measurands over a three-year time period; the SD chair will be involved in deciding which projects are taken forward.

ICHCLR lists a number of measurands that require work and should be prioritised.

Body of letter from Christa Cobbaert to Sverre Sandberg dated 21 September 2023

Many thanks for sending IFCC SD, on behalf of the ICHCLR Council, a constructive reply on July 25th regarding the IFCC SD response letter d.d. June 26th 2023 on joint working groups for harmonization of medical tests.

We understand ICHCLR wants to move on and therefore I give you a reply from my perspective as IFCC SD chair, taking into account the mission and objectives of IFCC SD, and having pre-discussed the content of your letter with the past SD chair and the current vice-chair.

IFCC SD is ready to start a science-oriented collaboration with ICHCLR where ICHCLR brings in proposals to the IFCC SD board -according to existing IFCC SD submission procedures- regarding harmonization projects of prioritized analytes for which no Reference Materials or Reference Measurement Procedures are available. IFCC SD supports the idea that ICHCLR aims to start by pro-actively placing an open call for harmonization proposals of medical tests where the clinical need for harmonization is high. Even so, IFCC SD agrees that establishing joint IFCC SD/ICHCLR working groups is key and will create synergy between the members and representatives of the two organizations.

We hereby confirm that IFCC SD agrees that the WG chairs and members will be jointly agreed upon, as part of the regular IFCC SD project proposal evaluation process, along with the proposed work program and approach to be followed, taking into account the relevant ISO guidelines and IFCC SD's mission and objectives. It is good to hear that ICHCLR agrees with the reporting regimen and standard IFCC SD approach, including the way how IFCC SD organizes its meetings, activities and feedback loops.

Stakeholders of the metrological traceability chain and professional organizations with whom IFCC has Memoranda of Understanding, all have a representative per stakeholder or organization in the IFCC SD. This is the current norm. In my letter d.d. June 26th I did not intend to suggest that IFCC SD agrees on two ICHCLR representatives in the IFCC SD board and SD meetings. I mentioned Greg Miller, being the founder of the international harmonization initiative and the driver beyond the establishment of ICHCLR, as an expert on harmonization topics who participates already in the IFCC SD. And indeed, Greg Miller currently represents JCTLM. Yet, mutually exchanging science and expertise among experts is what we strive for. Therefore, the nomination/continuation of one ICHCLR representative in the IFCC SD is the intended current norm.

Regarding the liaison function: in the IFCC SD meetings we collectively decide / agree on the liaisons (contact persons) to specific WGs/Cs, mostly depending on interest and expertise of the liaison. As we keep the IFCC SD procedures and procedural manual "as is", we are confident

that this is a very productive way of involving the participating members/representatives and dividing the workload.

We understand that ICHCLR aims to start and therefore should not have to await another IFCC SD meeting almost 2 months away. To take forward this collaboration IFCC SD agrees about the fact to issue an open call on behalf of ICHCLR and IFCC SD, with the intention to propose and take forward joint, relevant and sustainable harmonization projects, with the possibility for ICHCLR funding for successful applicants. Note that IFCC WG/Cs are not funded by IFCC. Working with an open call and funding is different from the current IFCC SD approach where interested parties bring in themselves new IFCC SD project proposals and generate their own fundings. An open call will for sure be motivating for applicants. It is appreciated to exchange the open call invitation ahead so that IFCC SD members can give input.

Finally, in order to experience with both organizations how to interact in an effective and fruitful way for the sake of test standardization/harmonization and to become even more complimentary it would be great to be mutually transparent and to periodically evaluate this collaborative process on its outcomes and successes/ challenges.

Looking forward to a productive and inspiring collaboration.

European Federation of Clinical Chemistry and Laboratory Medicine (EFLM)

2023 highlights are:

- EFLM opens to corporate members
<https://www.eflm.eu/upload/docs/EFLM-Corporate-Membership.pdf>
- EFLM Continuing Professional Education Credit System for the accreditation of continuing education events (TF-EFLM CPECS®):
<https://www.eflm.eu/site/page/a/1775>

Also other education credit systems available and must be considered. There is an upcoming meeting with Arab countries on this matter.

- EFLM CERTIFICATION FOR GREEN AND SUSTAINABLE LABORATORIES aimed to implement sustainable practices in medical laboratories (i.e. about water, waste, energy and chemicals management)
<https://preview.mailerlite.com/q4d8m8j2r0>

Regulatory requirements on environmental matters are getting stricter. In Europe end-users have to calculate to concentrations of non-biodegradable materials in laboratory liquid waste. The liquid waste must be incinerated, which is very expensive and very difficult to organize. The problem originates from the non-biodegradable reagents used in the tests. Industry has pushed the responsibility to end-users to deal with these problematic materials. However, the IVD industry should take responsibility and replace these problematic materials in the tests even if it is a huge undertaking. In the current situation sustainable way of running a clinical lab is becoming critical. This could also be a topic for a practice guideline (suggested by GM).

- EFLM strategic plan 2022-2023: relevant to mention are the strategic objectives to maintain and improve collaboration with IFCC and IFCC Regional Federations by making agreements with IFCC for the EFLM special projects such as CPECS and GSL certificate projects.
- Preparations started for an EFLM strategic conference in 2024: “A vision to the future: Value-based Laboratory Medicine

- Contribution to EU call on “**Developing EU methodological frameworks for clinical/ performance evaluation and post-market clinical/performance follow-up of medical devices and in vitro diagnostic medical devices (IVDs)**” is ongoing.

There is a project proposal being prepared which aims to keeping tests fit-for-purpose throughout the lifetime of the test. A regulatory model is suggested and the project is about to implement this model. The project is meant to educate the regulators/ notified bodies, end-users and IVD industry (esp. SME IVD companies). SMEs are >90% of IVD industry but usually have very limited number of tests per company and not necessarily people with required knowledge. For the current EU IVD regulatory system there is currently not enough notified bodies. Also standardization is to be included in the proposal. The proposal is to be finished by the end of March 2024.

World Health Organization (WHO)

There is no update available.

Activities of Committees and Working Groups

The Committees (Cs), which are theme-oriented, carry out much of the scientific and professional activities of the SD. Their work is often in close collaboration with other international organizations. For more specific tasks, the activities are usually accomplished through Working Groups (WGs).

COMMITTEES

C-Nomenclature, Properties and Units (C-NPU)

Chair: Young Bae Lee Hansen (DK)

Term of reference 1

To continuously provide advice for the management, updating and publishing of the NPU terminology

List 2023 accomplishments for this Term of Reference

The IUPAC project Online Dynamic Manual has been finalized and a homepage, www.labterminology.com, has been published. The homepage contains the rules and principles of the NPU terminology in which the users can be guided in understanding how to make NPU codes.

List planned activities in 2024 for this Term of Reference

Continue teleconference and face-to-face meetings of both the C-NPU and NPU SC.

C-NPU continues to review terminological issues around use of the NPU terminology from users and national release centers.

The new homepage, www.labterminology.com, will continuously be developed.

Term of reference 2

To make recommendations on NPU for reporting clinical laboratory data that conform to or adapt current standards of authoritative organizations, and that will improve their utilization for health care.



List 2023 accomplishments for this Term of Reference

NPU Steering Committee continues to administer and update its strategic plan and work on the international release centres.

List planned activities in 2024 for this Term of Reference

C-NPU will continue to work in order to broaden the international use of NPU terminology and to demonstrate how NPU terminology may be used with other terminologies and open standards, for example SNOMED CT and FHIR messaging.

C-NPU will work on an international communication standard for a laboratory information model, and establish NPU terminology as an integral component of laboratory messaging.

Term of reference 3

To provide a connection with other organizations concerned with NPU such as the Bureau International des Poids et Mesures (BIPM), the European Committee for Standardization (CEN) and the International Organization for Standardization (ISO), and, by extension, clinical laboratory science societies such as the International Union of Pure and Applied Chemistry (IUPAC), and the in vitro diagnostics industry, to ensure that problems encountered by health care professionals in the area of NPU are considered by those organizations.

List 2023 accomplishments for this Term of Reference

C-NPU is representing IFCC as Liaison A member in the ISO working group, TC215.

C-NPU has been in meetings with a subgroup of JCTLM, chaired by Dr. Elvar Theodorsson in discussing the need of information about measurement procedures and how to establish a standardized description of measurement procedures.

Titular member Koh Furuta (KF, JPN) participate in the revision of ISO 15189

Gunnar Nordin participate in BIPM WG2 meetings and provide input into the upcoming VIM4 (International Vocabulary of Metrology).

Daniel Karlsson reports to the NPU on IHTSDO/SNOMED-CT related matters.

List planned activities in 2024 for this Term of Reference

Continuation of activities described above

ADDITIONAL INFORMATION

The NPU Steering Committee website continues to act as the main governance site (<http://www.npu-terminology.org>), while the NPU terminology itself can be searched from (<http://www.ifcc.org/ifcc-scientific-division/sd-committees/c-npu/npusearch/>).

The NPU also holds a Wikipedia page at https://en.wikipedia.org/wiki/NPU_terminology.

2023 Meetings / conference calls held

Virtual meetings

Monthly 1-hour meetings except in July

Face-to-face meeting

21st May (in conjunction to IFCC Worldmedlab) Rome, Italy



Meeting schedule in 2024

- 26th January 1-hour Teleconference meeting
- 23th February 1-hour Teleconference meeting
- 22th March 1-hour Teleconference meeting
- 26th April 1-hour Teleconference meeting
- 26th May 8-hour face-to-face meeting
- 28th June 1-hour Teleconference meeting
- 30th August 1-hour Teleconference meeting
- 27th September 1-hour Teleconference meeting
- 25th October 1-hour Teleconference meeting
- 29th November 1-hour Teleconference meeting
- 20th December 1-hour Teleconference meeting

Publications/conference presentations/webinars

Lee Hansen Y, Toska K, Lund A, Flatman R, Ceder R. Properties and units in the clinical laboratory sciences. Part XXVII: online dynamic NPU manual (IUPAC Technical Report). Pure and Applied Chemistry. 2023;95(2): 125-131. <https://doi.org/10.1515/pac-2021-1109>

C-Molecular Diagnostics (C-MD), Chair: Parviz Ahmad-Nejad (DE)

Term of reference 1

Provide reports about the current status quo in Molecular Diagnostics. We use surveys in English and Spanish to gather information as a method.

List 2023 accomplishments for this Term of Reference

Publication of the survey on ctDNA analysis and CCA (Results from an IFCC global survey on laboratory practices for the analysis of circulating tumour DNA - PubMed (nih.gov))

Creation of a new survey on quality assurance, EQA, syndrome diagnostics, SARS-CoV-2 and MPox. The generated data is currently being summarised and prepared for publication

Development of an international survey on the diagnosis of tuberculosis; published by the IFCC (Nov 13th). The generated data is currently being summarised and prepared for publication

List planned activities in 2024 for this Term of Reference

As already mentioned in the last annual report and as discussed with the Scientific Division, the Molecular Diagnostics Committee will be dissolved at the end of the year, so that no new work priorities will be pursued in 2024. This issue also discussed with the members of the committee during the last meeting at WorldLab2023 in Rome. There was a consensus that molecular diagnostics cannot be represented as a whole within the framework of a committee.

In 2024, new proposals for new committees/working groups with molecular genetic issues (for example on molecular genetic diagnostics in tumour diseases or infectious diseases) are to be submitted to the Scientific Division.

Term of reference 2

To produce guidelines on molecular techniques and their validation for routine diagnostics

List 2023 accomplishments for this Term of Reference

The committee has not generated any demonstrable data on this in 2023.

List planned activities in 2024 for this Term of Reference

See above.

Term of reference 3

To create a network of locus-specific IFCC Molecular Diagnostic Centres

List 2023 accomplishments for this Term of Reference

A current list of the lab can be found here:

www.ifcc.org/ifcc-scientific-division/sd-committees/c-md/moleculardiagnosticcentresoftheifcc/

and

www.ifcc.org/ifcc-scientific-division/sd-committees/c-md/molecular-diagnostic-network-laboratories/.

List planned activities in 2023 for this Term of Reference

See above

2023 meetings / conference calls held

IFCC - Committee on Molecular Diagnostics - Monday, May 22nd

ADDITIONAL INFORMATION

As already addressed in the last annual report the question arises as to whether the entirety of molecular genetic diagnostics in its complexity can be dealt with at all in a C-MD committee today.

The committee definitely has experts in its own ranks, but the expertise is sometimes very far apart, especially as the discipline of "molecular diagnostics" has become very large. Topics such as diagnostics of infectious disease, detection of somatic tumour mutations, μ RNA, CTCs and non-invasive prenatal testing (NIPT) have become increasingly important. Against this background, it is rather difficult and inefficient for a five-member committee to attempt to address issues of standardisation and quality improvement at an international level and to draw up recommendations.

Against this background, we have decided in Rome not to continue the C-MD in its current form and to initiate a reorganization of the committee. It might be sensible to establish at least two working groups/committees. One working group/committee should focus on the molecular genetic analysis of infectious diseases, and another group should deal with molecular genetic analysis in the oncological context (NGS/Liquid Profiling). At the end of 2023, this was discussed with Christa Cobbaert and Saara Wittfooth and initiated two proposals, which are currently being developed by Denise O'Sullivan (UK - Committee for Molecular Diagnostics of Infectious Diseases – CMDID) and Shiyang Pan (CN - CMDO Molecular Diagnostics in Oncology) and will be submitted to the SD in the coming weeks.



Publications/conference presentations/webinars

Clin Chim Acta. 2023 Jul 1:547:117398. doi: 10.1016/j.cca.2023.117398. Epub 2023 May 20. Results from an IFCC global survey on laboratory practices for the analysis of circulating tumor DNA Mark W Linder 1, Jim F Huggett 2, Katarina Baluchova 3, Ettore D Capoluongo 4, Deborah A Payne 5, Aldo Vacaflores Salinas 6, Verena Haselmann 7, Tester Ashavaid 8, Shiyang Pan 9, Parviz Ahmad-Nejad 10; IFCC Committee for Molecular Diagnostics C-MD PMID: 37217114 DOI: 10.1016/j.cca.2023.117398

Presentations by P. Ahmad Nejad and Aldo Vacaflores at the AACC/ADLM meeting in Anaheim 2023. We (Payne/Ahmad-Nejad/Vacaflores) submitted a proposal that was accepted by ADLM formerly AACC whereby we discussed the results of our survey. 33223 External Quality Assessment and Alternative Assessment in Molecular Diagnostics: Findings from an IFCC Survey. AACC 2023 Annual Scientific Meeting and Clinical Expo Anaheim, CA (see photo attachment).

Presentation by P. Ahmad Nejad at the 10th Zijin International Forum on Molecular Diagnostics in Nanjing/China. Presentation of the latest results of our joint work

Two further manuscripts are currently being prepared for publication. Both manuscripts analyse the results generated by the 2023 surveys. The surveys:

2023 IFCC C-MD survey on the molecular diagnosis of tuberculosis (including drug resistance) and its quality assurance and 2023 IFCC C-MD survey on quality assurance in molecular diagnostics focusing on infectious disease and syndromic testing) were conducted in several languages and included more than 100 laboratories worldwide.

C-Traceability in Laboratory Medicine (C-TLM)

Chair: Anja Kessler (DE)

No report received for Annual Report; section extracted from most recent report presented to the May SD-EC.

The IFCC RELA survey has been organised annually since 2003. The number of participation increases year by year (82 labs from all the world, 680 results in 2022) and underlines the importance of this survey program for the calibration laboratories. Participation is an essential part of both accreditation of the calibration laboratories according to ISO 17025 and ISO 15195 as well as the listing of the services in the JCTLM database.

Joint projects between NMIs and C-TLM are organized in order to optimize cooperation and comparison studies. For example, in 2022 the participants of the CCQM comparison and RELA survey received the same samples for HbA1c and 20 labs in total provided results analysed by IFCC HbA1c method or ID/LC/MSMS which have to be evaluated and discussed. So, the comparison between different levels of the traceability hierarchy as well as different reference measurement procedures was possible and demonstrated the establishment of traceability.

The availability of reference materials is a key requirement for maintaining reference measurement procedures and traceability. If reference materials are used by the end user or manufacturer for calibration directly, these valuable reference materials will rapidly become rare and the established traceability chains will collapse. It can already be seen today that the reference materials cannot be reproduced promptly in line with demand. It is essential that calibration laboratories are involved in the traceability hierarchy to avoid a bottleneck. C-TLM would like to think about strategies

C-Reference Intervals and Decision Limits (C-RIDL),

Chair: Thomas Streichert (DE)

Term of reference 1

List 2023 accomplishments for this Term of Reference

RIs and Gestational Age (Streichert, Yadav)

Protocol for pregnancy related Reference Intervals was established

Data acquisition completed

Initial evaluations were carried out using indirect methods

List planned activities in 2024 for this Term of Reference

Critical review of whether indirect methods are really suitable for calculating pregnancy-related reference intervals, as the problem of gestational age and biological age and necessary data points arises here.

Term of reference 2

List 2023 accomplishments for this Term of Reference

Education in verification of reference intervals with Excel and R including creation of CRAN packages (Georg Hoffmann)

Workshop on Indirect methods (Thomas Streichert)

Data cleaning procedure before indirect calculation

Comparison of different direct and indirect methodologies

Online Tool –RefineR, TML, reflimR

New online-tool: kc.uol.de/rifindr/

List planned activities in 2024 for this Term of Reference

The indirect methods provide a range of options for verifying or evaluating reference ranges as well as for establishing new reference limits. However, as the methods are complicated, further education and training is required. In this respect, further practical exercises are planned as part of the meetings.

Term of reference 3

List 2023 accomplishments for this Term of Reference

RLS for geriatric people (Yeşim Özarda)

- Data from Turkey was analysed using various indirect methods
- Manuscript in preparation

List planned activities in 2024 for this Term of Reference

Completion of manuscript and publication.

Term of reference 4

List 2023 accomplishments for this Term of Reference

Update on Guideline CLSI EP28 (Yachana Kataria)





List planned activities in 2024 for this Term of Reference

YK will keep us up to date.

Term of reference 5

List 2023 accomplishments for this Term of Reference

Updates from C-RIDL members on activities from national societies/ working groups: Derivation of Russian specific reference intervals for complete blood counts and iron markers (Anna Ruzhanskaya)

List planned activities in 2024 for this Term of Reference

finished

Term of reference 6

List 2023 accomplishments for this Term of Reference

Educational Workshop at the AACCC/ ADLM in Anaheim 2023

List planned activities in 2024 for this Term of Reference

This ToR has been completed,

ADDITIONAL INFORMATION

Planned activities of C-RIIDL together with TF-GRID:

Proposed: IFCC Symposium Sponsorship – Invitation – EML Congress, Brussels, BE
May 18-25, 2025.

The title of the symposium: New Options for Reference Intervals

With increasing digitalization and digital patient records, laboratory test results are not only in the hands of specialists, but also in the hands of patients. In order for their interpretation to be successful, good reference limits are required, ideally with gender specificity, and -where necessary- with fine age granularity addressing both groups, medical specialists as well as patients.

Current indirect approaches to RI estimation in particular offer the possibility of a) verifying existing limits, b) estimating new limits and c) developing these in a medical context into continuous intervals and even personalized reference intervals that correspond to human biology.

The title and name of the speaker for each of the 4 presentations

Discrete or Continuous Reference Limits? Options in the Light of Electronic Patient Archives.

Thomas Streichert

The Global Reference Interval Database – A valuable Resource for Laboratory Medicine.

Jakob Zierk

Reference Interval Harmonization – Is it possible?

Victoria Higgins or Ken Sikaris (also possible Mary Kathryn Bohn or Khosrow Adeli - to request)

Personalized and Population-Based Reference Intervals.

Abdurrahman Coşkun (to request)

Proposal for a joint TF-GRID/C-RIDL Educational Workshop. 1 day Pre-Congress Satellite Meeting: Indirect Reference Interval Methods: Educational Course & Hands-on Workshop in Brussels 2025

The IFCC TF-GRID and C-RIDL aim to conduct a one-day satellite meeting prior to the IFCC Brussels 2025. The underlying aim is to support the framework for reference interval education, determination and comparisons.

The goals are to

- Provide an educational opportunity for reference interval theory and statistical practice
- Promote the tools that will be used on the TF-GRID website
- Provide a workshop for hands-on, critical deployment indirect reference interval tools (refineR) using sample data that explores the technical principles and impacts.
- Programme (prelim.):

Time	Duration	Topic	Speaker
Educational Workshop			
08:45	15 min	Welcome and introduction	J Zierk & T Streichert & IFCC Nominee
09:00	15 min	Importance of Reference Intervals;	NN
09:15	45 min	Reference Intervals Theoretical Basis	MK Bohn
10:00	45 min	Statistical Approaches to Reference Intervals	A Coskun
10:45	15 min	Morning Tea	
11:00	45 min	Identifying health by excluding disease	KA Sikaris
11:45	45 min	Modern tools for reference Interval analysis	AB Leichtle
12:45	60 min	Lunch	
Hands-on-Workshop: participants analyse datasets on their own laptops in a classroom-style environment			
13:30	15 min	Introduction to workshop	T Streichert
13:45	45 min	Workshop Group Activities A (focus: R)	JZ/KAS/MKB
14:30	45 min	Workshop Group Activities B (focus: refineR)	JZ/ABL/AC
15:15	15 min	Afternoon Tea	
15:30	60 min	Presentation of Group Activities	Participants
16:30	30 min	Conclusions and Discussion	J Zierk

Jakob Zierk (jakob.zierk@uk-erlangen.de), TF-GRID Chair
Thomas Streichert (thomas.streichert@uk-koeln.de) C-RIDL Chair

2023 meetings / conference calls held

- C-RIDL meeting online on January 20, 2023
- C-RIDL meeting in presence:
- May 21, 2023, at the EuroMedLab Congress in Rome
- C-RIDL meeting online on August 18, 2023
- C-RIDL meeting online on December 8, 2023

Meeting schedule in 2024

- C-RIDL meeting online on March 5, 2024
- C-RIDL meeting in presence:
- May 26, 2024, at the WorldLab Congress in Dubai
- C-RIDL meeting online planned in August and December 2024

Publications/conference presentations/webinars

Indirect Reference Intervals; A workshop regarding principles, pre-requisites and practical application of statistical techniques	
Kenneth Sikaris	Moderator
The principles of reference intervals and their determination by direct and indirect techniques.	
Kenneth Sikaris	Speaker
Data pre-requisites and statistical approaches used in Indirect reference intervals	
Kenneth Sikaris	Speaker
Workshop on Indirect Reference Intervals techniques including data cleaning and application of refineR.	
Jakob Zierk	Speaker

Workshop in Anaheim/ LA at the AACCC/ ADLM meeting 2023

Data pre-requisites and statistical approaches used in Indirect reference intervals

C-Standardisation of Thyroid Function Tests (C-STFT),

Chair: Katleen Van Uytfganghe (BE)

Term of reference 1

Establish a system to maintain traceability of free thyroid hormone and TSH measurements.

List 2023 accomplishments for this Term of Reference

Maintaining the reference system for fT4:

The focus for this item is the creation of reference laboratory capacity and the coordination of activities conducted by the reference laboratories to leverage synergies and minimize duplication.



Success is indicated in having a functional network of reference laboratories (FT4 RLnetwork) that are active in standardizing FT4 measurements performed in clinical and research settings. Furthermore, it is indicated in new organizations being interested in joining the network and in publications being available or currently under review.

- a. A network of reference laboratories was established consisting of the following laboratories: Ref4U (Belgium), CDC Clinical Reference Laboratories (USA), Radboud University Medical Center of Nijmegen (The Netherlands), and Reference Material Institute for Clinical Chemistry Standards (Japan). Interest for joining the network was indicated by 2 organizations located in China. Communications are ongoing.
- b. The Network completed a second method comparison study (MC2), and held dedicated meetings to discuss performance criteria for the network, the design of regular interlaboratory comparisons that will allow the continuous evaluation of network members, and the requirements for new members to enter the network. A final report is under preparation in the format of a publication by Dr. Van Uytvanghe.
- c. While the method and services of Ref4U and the method of CDC are already registered in the JCTLM database, the Radboud laboratories published their methods, which is a required step for JCTLM review. It is planned to have all reference methods and labs either listed in the JCTLM database or being ISO accredited.
- d. Ref4U provided reference measurement services to different organisations for FT4, but also for TT4. Ref4U provided consultancy on the development and validation of FT4 (reference) measurement procedures.
- e. CDC laboratory is providing reference measurements to the U.S. Collage of American Pathologists Accuracy-based surveys. Furthermore, it is providing technical assistance to manufacturers related to assay recalibration. CDC Clinical Standardization Programs have put in place a formal standardization program for FT4 with reference measurements linked to the IFCC- C-STFT reference system.
- f. CDC and UGent laboratories created manuscript on preanalytical parameters for FT4 measurements by mass spectrometry. The manuscript is published.
- g. The laboratory at Radboud University provided measurements for FT4 in a research study to assess FT4 status in specific patient populations.

Maintaining the reference system for TSH:

The focus of this item is on ensuring continuation and consistency of harmonization by creating a follow-up panel for TSH. At the same time, the C-STFT is assisting with coordinating harmonization activities conducted by manufacturers and national/regional organizations.

- a. The study design to create and characterize the next TSH harmonization panel according to ISO 21151 was completed, Ethics approvals and Material Transfer Agreements for collecting and processing sera are in place. Specimen collection is finalized (about a 150 samples from different donors were collected). Samples are now at the CDC Clinical Standardization Programs for aliquoting and assembling the sample sets. Samples will be further stored at the facilities of the CDC Clinical Standardization Programs.
- b. C-STFT provides assistance to NIBSC with characterization of new WHO International standards material. The current 3rd WHO International Standard for human TSH (81/565) needed to be replaced by the candidate 4th WHO International Standard for human TSH (81/615). The material is needed to link TSH measurements to International Units. Once



linked to International Units, the assays can be recalibrated to be linked to the IFCC C-STFT harmonization panel. NIBSC provided the WHO International Standard, C-STFT follow up panels were provided by C-STFT, CDC Clinical Standardization Programs is conducting the shipments and is assisting with data collection. The characterization study is finalized: 15 participants in 9 countries participate in this study. Both the WHO report and a scientific manuscript are published.

c. In practice, the above is combined in a 2 phase study.

* In the first phase (2023 IFCC TSH Study Phase 1, 2023 ITS Phase 1), a set of samples from the TSH follow-up panel, which was certified along with the initial TSH harmonization panel (see DOI: 10.1373/clinchem.2016.269456) was measured. In addition, some ampules of the current 3rd WHO International Standard for human TSH (81/565) and the candidate 4th WHO International Standard for human TSH (81/615) were measured. These measurements have been done, all participants have reported their results. Results were discussed at the C-STFT meeting in May 2023.

* The TSH follow-up panel is intended to be used to recalibrate the assays against its targets. Once the assays are recalibrated, values are assigned to the 3rd TSH harmonization panel, which will be provided in a second shipment. The work conducted in the second shipment is considered phase 2 of the 2023 IFCC TSH Study (2023 ITS Phase 2). Sample sets are under preparation and the actual measurements will be conducted in 2024.

d. To ensure continuation and consistency of harmonization of TSH reference measurement system a more professionalized way of collecting samples should be established. This might need cooperation with professional organizations and/or industry, which needs to be explored.

TSH harmonization based on the IFCC C-STFT reference system is officially implemented in Japan and assay manufacturers are now using the harmonization panel to adjust assay calibration. A manuscript is being drafted.

List planned activities in 2024 for this Term of Reference

1. Formalise the operational rules for the FT4 network of reference laboratories. This includes network protocols and ISO compliant SOPs.
2. Evaluation of 2 new candidates for the FT4 network of reference laboratories.
3. Continue to build laboratory capacity by supporting laboratories with establishing reference measurement procedures
4. Continue support to develop and characterize reference materials developed by metrological organizations
5. Establish new follow-up harmonization panel for TSH and explore development of formal matrix-based reference materials for TSH

Term of reference 2

Coordinate programs to evaluate free thyroid and TSH assays with regards to their analytical performance.

List 2023 accomplishments for this Term of Reference

Coordinate national/regional programs related to FT4 standardization and TSH harmonization



The C-STFT strategy is to ensure consistent calibration to the IFCC C-STFT system globally and to coordinate their implementation on a national/regional level. This allows regional and national organizations to customize activities to meet regional needs and requirements as outlined in relevant regulations and clinical practice guidelines (“Calibrate globally – Implement locally”).

B1: FT4

- a. Ref4U, CDC and the laboratory at Radboud University provide reference measurement services to all interested parties.
- b. CDC Clinical Standardization Programs runs a Thyroid Hormone Standardization Program. CDC ensures that the program is linked to the IFCC C-STFT by being a successful member of the reference laboratory network. Results were presented at scientific meetings and made available to the IFCC C-STFT.
- c. Japan is working on a national program to standardize FT4 measurements. Relevant stakeholders are working with the Japanese reference laboratory.
- d. Accuracy-based EQA providers in the Netherlands and the U.S. use the IFCC C-STFT reference laboratory network for FT4 for target value assignments.

B2: TSH

- a. The TSH harmonization in Japan is linked to the IFCC C-STFT harmonization panel. Harmonized measurement are now used in patient care.
- b. IReference material providers such as NIBSC (UK) and NIST (USA) collaborate with the IFCC C-STFT reference system for reference material characterization.

List planned activities in 2024 for this Term of Reference

- a. Assist with the development and establishment of national/regional programs to standardize/harmonize TSH and FT4 through formal standardization programs and/or by supporting accuracy-based EQA programs.
- b. Ensure national/regional efforts are linked to the IFCC C-STFT reference system by making that system available to those efforts.

Term of reference 3

Develop reference intervals for free thyroid hormones and TSH.

List 2023 accomplishments for this Term of Reference

IFCC C-STFT is supporting the generation of regional/local reference intervals using methodologies that are standardized/harmonized to the IFCC C-STFT reference system. Because harmonized and standardized assays have not been available until recently. The development of reference intervals linked to the C-STFT reference system has been slow.

- a. The reference intervals established in Japan as part of TSH harmonization are as of 2021 officially been used.
- b. CDC is working with national surveys and other studies to assess the feasibility for establishing reference interval in the U.S. population.
- c. C-STFT continues communications with researchers to assess the possibility of using existing study and patient data as well as analysing samples in new reference interval studies.





List planned activities in 2024 for this Term of Reference

Coordinate with principal investigators and organizations work related to developing reference intervals to ensure new reference intervals are generated with standardized and harmonized assays. Continue to try to work with the IFCC C-RIDL.

Term of reference 4

Liaise with key stakeholders to promote the use of the standardized assays in routine clinical practice and public health, to ensure analytical performance requirements meet clinical needs, and to help with developing and establishing reference intervals.

List 2023 accomplishments for this Term of Reference

Dr. Van Uytfanghe represents the C-STFT in an American Thyroid Association (ATA) working group that prepares a manuscript about current practices on thyroid hormone measurements. 3 manuscripts were published by this group.

Dr. Vesper and Dr. Danilenko provided an update about the IFCC reference method, state of the thyroid function testing standardization and the interlaboratory comparison study at the Partnership for the Accurate Testing of Hormones (PATH) Steering Committee Meeting in April 2023 (virtual meeting).

Dr. Danilenko presented on advancing of free hormone measurements including FT4 reference measurements at the CDC Forum in conjunction with the annual ADLM meeting, Anaheim CA, July 2023.

Dr. Danilenko presented an update on IFCC reference method, state of the thyroid function testing standardization and the interlaboratory comparison study at the round table session at ADLM meeting, Anaheim CA, July 2023.

Dr. Van Uytfanghe presented the work of IFCC C-STFT at the annual bioclinical symposium that will be held on December 7 and 8 2023 in Paris under the auspices of the SFMN.

Dr. Van Uytfanghe maintained and updated the IFCC C-STFT website.

List planned activities in 2024 for this Term of Reference

- a. Educate stakeholders, such as those conducting reference interval studies, about the importance of using standardized/harmonized assays. This is achieved by reaching out to principal investigators of large epidemiological studies and those using data from electronic health records.
- b. Continue to work with professional organizations such as the ATA to increase awareness about the importance of standardization in patient care and public health. This is achieved by publishing and continuing the work conducted by the ATA working group mentioned above.
- c. Continue to publish and present work conducted by IFCC C-STFT members and other organizations performing or supporting work of thyroid function test standardization. This is achieved by conducting scientific sessions at national meetings such as the AACC and other organizations.
- d. Update website to better communicate changes associated with FT4 standardizing and TSH harmonization.

ADDITIONAL INFORMATION

The C-STFT welcomed 2 new members beginning of 2024, Dr. Danilenko and Prof. Sang Hoon Song

The chair is thankful for the efforts made by the members, the former chair and the partners in the FT4 RLnetwork to allow their co-workers to allocate time for the C-STFT activities and hopes for a continuation of this joint effort in the future.

2023 Meetings / conference calls held

Meetings open to all members, corresponding members, industry partners and other interested partners:

- Virtual and in-person C-STFT meeting held in conjunction with IFCC EuroMedLab in Rome, 22 May 2023

Meetings with members only

- 18/1/2023, 27/3/2023, 22/5/2023, 10/01/204
- Several specific calls were organized in order to e.g. select new members of the C-STFT

FT4 RLnetwork meetings

- 3/4/2023, 8/5/2023, 31/1/2024

TSH harmonization meetings

- Several calls were organized to discuss practicalities in the organization of the work discussed under Terms of Reference 1.

Meeting schedule in 2024

There is no formal meeting schedule for the members only, FT4 RLnetwork or TSH harmonization meetings, however regular meetings will be needed in order to follow-up with the different projects that are ongoing.

The annual general C-STFT meeting is scheduled in conjunction with IFCC WorldLab, May 2024 in Dubai.

Currently investigating the possibility to organize a dedicated meeting at the end 2024.

Publications/conference presentations/webinars

Publications by different C-STFT members, based on the activities with the C-STFT or the FT4 RLnetwork.

Cowper B, Lyle AN, Vesper HW, Van Uytfanghe K, Burns C. Standardisation and harmonisation of thyroid-stimulating hormone measurements: historical, current, and future perspectives. *Clin Chem Lab Med.* 2024 Jan 31. doi: 10.1515/cclm-2023-1332. Epub ahead of print. PMID: 38295422.

WHO/BS/2023.2454 WHO 4th International Standards for TSH (human, pituitary)

Ribera A, Zhang L, Ribeiro C, Vazquez N, Thonkulpitak J, Botelho JC, Danilenko U, van Uytfanghe K, Vesper HW. Practical considerations for accurate determination of free thyroxine by equilibrium dialysis. *J Mass Spectrom Adv Clin Lab.* 2023 Jun 23;29:9-15. doi: 10.1016/j.jmsacl.2023.06.001. PMID: 37449264; PMCID: PMC10336244.

Jansen HI, van der Steen R, Brandt A, Olthaar AJ, Vesper HW, Shimizu E, Heijboer AC, Van Uytfanghe K, van Herwaarden AE. Description and validation of an equilibrium dialysis ID-LC-MS/MS candidate reference measurement procedure for free thyroxine in human serum. *Clin*



Chem Lab Med. 2023 Mar 31;61(9):1605-1611. doi: 10.1515/cclm-2022-1134. PMID: 36994743.

Ribera A, Zhang L, Dabbs-Brown A, Sugahara O, Poynter K, van Uytfanghe K, Shimizu E, van Herwaarden AE, Botelho JC, Danilenko U, Vesper HW. Development of an equilibrium dialysis ID-UPLC-MS/MS candidate reference measurement procedure for free thyroxine in human serum. Clin Biochem. 2023 Jun;116:42-51. doi: 10.1016/j.clinbiochem.2023.03.010. Epub 2023 Mar 20. PMID: 36940844.

Publications from the ATA working group, with active participation of Dr. Van Uytfanghe to ensure information is mentioning or in line with the C-STFT activities. Loh TP, Ehrenkranz J, Halsall D, Hoff K, Spencer CA, Van Uytfanghe K, Köhrle J. Response to Fitzgerald et al. re: "Thyroid Stimulating Hormone and Thyroid Hormones (Triiodothyronine and Thyroxine): An American Thyroid Association- Commissioned Review of Current Clinical and Laboratory Status". Thyroid. 2024 Feb;34(2):276-278. doi: 10.1089/thy.2023.0604. Epub 2024 Jan 17. PMID: 38236706.

Van Uytfanghe K, Ehrenkranz J, Halsall D, Hoff K, Loh TP, Spencer CA, Köhrle J. Thyroid Stimulating Hormone and Thyroid Hormones (Triiodothyronine and Thyroxine): An American Thyroid Association-Commissioned Review of Current Clinical and Laboratory Status. Thyroid. 2023 Sep;33(9):1013-1028. doi: 10.1089/thy.2023.0169. Epub 2023 Sep 1. PMID: 37655789; PMCID: PMC10517335.

Loh TP, Ehrenkranz J, Halsall D, Spencer CA, Van Uytfanghe K, Köhrle J. Clinical Interpretation of Thyroid Tests: Considerations for Reference Intervals. Thyroid. 2023 Apr;33(4):404-406. doi: 10.1089/thy.2023.0096. PMID: 36927102.

C-Bone Metabolism (C-BM), Chair: Etienne Cavalier (BE)

Term of reference 1: PTH Standardisation

List 2023 accomplishments for this Term of Reference

During the meeting held in Rome, Etienne Cavalier has presented the state of the art of PTH candidate RMPs which have recently been published. He has also presented the results of the in-silico recalibration of 5 PTH assays on the candidate RMP from Liege (later published in Kidney International). This has debunked the ox-PTH story and the cross-reactivity of the PTH fragments with 2nd Gen antibodies, paving the way for a full PTH standardization.

A network of reference labs for PTH (so far, CDC and University of Liege) has started to emerge and administrative paperwork between the two Institutions to allow sample exchange has been done. In 2024, a comparison between CDC and University of Liege candidate RMPs will be launched (the samples have already been prepared in 2023 and frozen at -80°C).

List planned activities in 2024 for this Term of Reference

Comparison of RMPs.

Participation to the 2nd Joint meeting on Reference Measurement Systems for PTH 1-84 (27 February 2024, at 2 pm (Paris time))

Term of reference 2: Bone Turnover Biomarkers

List 2023 accomplishments for this Term of Reference

A proposal for a new nomenclature for BTMs has circulated between the members and has largely been debated.

A revision of the 2011 recommendation paper has been accepted

A survey on the use of BTM has been developed.

List planned activities in 2024 for this Term of Reference

Agree on the revision of the nomenclature and publish this paper.

Organize a meeting (foreseen on March 13th) to revise the 2011 position paper

Launch the Survey through the IFCC office to the entire IFCC member's database.

Term of reference 3: Vitamin D

List 2023 accomplishments for this Term of Reference

The paper "Analytical performance specifications for the measurement uncertainty of 24,25-dihydroxyvitamin D examinations".

Cavalier E, Fraser CG, Bhattoa HP, Heijboer AC, Makris K, Vasikaran S, Huyghebaert L, Peeters S, Le Goff C, Herrmann M, Carobene A; IFCC-IOF Committee for Bone Metabolism has been published in CCLM.

For the pregnant women study, administrative paperwork between the University of Graz and the IFCC has been done. The collection has started.

List planned activities in 2024 for this Term of Reference

Collect the samples from pregnant women. Measure these samples with available immunoassays and LC-MS/MS.

WORKING GROUPS

WG-Standardization of Haemoglobin A₂ (WG-SHbA₂), Chair: Gabriel Arsene

Joint Working Group with ICSH (International Council for Standardization in Haematology)

No report received for Annual Report; section extracted from most recent report presented to the November SD-EC.

Terms of reference

To promote the standardization of haemoglobin A₂ measurement through the definition of an international reference system, including a reference measurement procedure and primary and secondary reference materials.



List 2023 accomplishments for this Term of Reference

The lyophilized materials with normal and elevated level of HbA₂ prepared by the EU-JRC in July 2021 (ERM DA-485/IFCC and ERM DA-486/IFCC) have been sent for value-assignment to the laboratories of INSTAND e.V and Physikalisch-Technische Bundesanstalt (PTB), both located in Germany. Additionally, a subset of 20 samples from the commutability study was sent to the PTB-laboratory for analysis using the reference measurement procedure, which is based on isotope-dilution mass spectrometry (ID-MS). All samples of the commutability study were analysed at PTB in September/October. The results are currently evaluated. They will be submitted to WG-members in November. In November and December all measurements of both primary reference materials (ERM DA-485/IFCC and ERM DA-486/IFCC) will be carried out in the laboratories of INSTAND e.V. and PTB. Details will be presented in the final report distributed with the CRMs. Further missing activities for listing the HbA₂-RMP in the JCTLM database are in the process of planning.

List planned activities in 2024 for this Term of Reference

To prepare the final report for both CRMs (ERMs materials)

To complete the activities to list the RMP for HbA₂ in the JCTLM database.

2023 MEETINGS / CONFERENCE CALLS HELD

Working group meeting together with corporate members at IFCC Worldlab in Rome

WG-Standardization of Carbohydrate-Deficient Transferrin (WG-CDT) , Chair: Jean Deenmamode (UK)

Term of reference 1

Promoting the use of the HPLC reference measurement procedure (RMP) as the accuracy base for CDT test standardisation

List 2023 accomplishments for this Term of Reference

Active members of the CDT WG contacted local QA organisers, as well as distributors and HPLC manufacturers operating in the diagnostics environment to seek potential interested laboratories from different countries.

The WG members planned to meet with such interested parties via video call or, if permitted, face to face

List planned activities in 2024 for this Term of Reference

All active members will continue discussion and support laboratories interested in establishing the HPLC reference method.

Term of reference 2

Maintaining sustainability of an international network of laboratories

List 2023 accomplishments for this Term of Reference

Sustainability and performance of network laboratories and participating commercial manufacturers are assessed by the yearly distribution of IFCC calibrators, controls and blind samples from the MCA Winterswijk NL laboratory overseen by the IFCC network coordinator, Carla Siebelder.

Laboratory performance is assessed on a pass/fail criterion and HPLC RMP.

Performance results are also further scrutinised by Drs J. Wielders and F. Schellenberg.

The 2023 Cycle took place. Performance and participation were presented and discussed during the CDT WG's annual meeting during EuroMedLab/WorldLab in Rome 2023.

JW and FS reviewed chromatographic patterns submitted.

Manufacturers' contribution towards this study do not form part of the CDT WG's funds.

List planned activities in 2024 for this Term of Reference

The Cycle of blind IFCC samples will take place during spring 2024, following prior invitation which will be sent to all prospective participants (network labs and manufacturers). Results will be presented and discussed during the annual meeting organised by the anticipated CDT advisory board in September 2024.

Term of reference 3

Supporting the worldwide standardisation of commercial methods against the RMP

List 2023 accomplishments for this Term of Reference

Most participating commercial CDT manufacturers achieved positive results towards CDTIFCC and have launched respective assays.

Two other CDT manufacturers who participated in the standardisation process did not accomplish the required results with the 2023 blind study.

Relevant WG members have been in active discussion and support with the manufacturers towards reviewing their approach to improve alignment closer to CDTIFCC

List planned activities in 2024 for this Term of Reference

Continue to assist the remaining commercial participants in successfully achieving the CDTIFCC goal. Monitor performance and adherence.

The WG will endeavour to support the definitive transition from classical CDT to CDTIFCC.

Term of reference 4

Offering consultation concerning use of biomarkers of alcoholism towards national and international agencies

List 2023 accomplishments for this Term of Reference

Generally, a local or extended activity initiated primarily by a member of the WG. The process has been in place with better success in Sweden and the Netherlands.

List planned activities in 2024 for this Term of Reference

To maintain the above activities ongoing in other countries.

ADDITIONAL INFORMATION

Two further terms

- **Providing scientific support for the production and delivery of authorised RMP**
Actively supporting other sites interested towards introducing the RMP as part of the IFCC approved CDT network laboratories



- **Supporting the development of guidelines for clinical use of CDT assays**
Work in progress
- **JCTLM nomination**
Dr Wielders received a communication from Greg Miller that approval had been successfully achieved in December 2023, with a formal communication to follow.



2023 Meetings:

- WorldLab / EuroMedlab, Rome 21st May 2023 – IFCC CDT WG annual meeting with closed and open sessions.
- Manufacturer organised extremely successful webinar with specific focus on CDT-IFCC – Ukraine – 20th September 2023 J. Deenmamode.
(The event was an outstanding success with over 100 registered Ukrainian participants. This included personnel from the Ukrainian ministry of health who are the driving force for CDT testing throughout their country. The uptake for the test is already overtaking those in a number of EU countries.
Considering the country's ongoing situation, I was most impressed by their proactive approach for CDT testing)
- Manufacturer organised presentation with focus on CDT-IFCC – Institute of Biomedical Science (IBMS) Congress 26 to 29th September 2023, Birmingham
UK - J. Deenmamode

ADDITIONAL INFORMATION

Standardisation and establishment of CDT-IFCC have been accomplished.

The WG's function was maintained to provide support for one or two manufacturers still working towards standardisation.

JCTLM task completed through the vigorous efforts of Dr Wielders and Dr Schellenberg.

Publications/conference presentations/webinars

- Position paper on CDT
Recommendations on the measurement and use of the alcohol consumption biomarker CDT
A position paper from the IFCC Working Group on CDT standardisation
J.P.M. Wielders, N.M. Porpiglia, F. Schellenberg, J. Deenmamode, J. Delanghe, R.F. Anton, F. Bortolotti, C. Siebelder, F. Tagliaro, C. Weykamp, A. Helander

Pre first submission to CCA - approved by members of the IFCC SD.

Awaiting CCA Editor's response post peer reviewed comments and resubmission of revised version, December 2023.

WG – Standardization of Albumin Assay in Urine (WG-SAU)

Chair: Jesse Seegmiller (US)

This WG is a joint WG between IFCC and NIDDK

Term of reference 1

Perform comparison studies on 10 urine specimens for urine albumin using the reference measurement procedures from Mayo Clinic (LC-MS/MS), NIST (LC-MS/MS), Singapore (LC-MS/MS) and the University of Minnesota Advanced Research and Diagnostic Laboratory (LC-MS/MS).

List 2023 accomplishments for this Term of Reference

Specimens were distributed in early 2023. Analysis by laboratories was completed throughout the year with 2 laboratories completing analysis in the winter. Comparative analysis is ongoing and terms of concordance are being discussed.

Several laboratories will need to publish their methods (UMN and Mayo Clinic) prior to JCTLM submission. Additional discussion on the error approaches are ongoing within the groups.

List planned activities in 2024 for this Term of Reference

Finalize the necessary acceptable criteria and data reduction by the summer of 2024 and submit for JCTLM submission likely in 2025.

2023 Meetings / conference calls held

A joint IFCC/LWG in person meeting was in conjunction with the AACC (Now ADLM) Annual meeting in Anaheim California on July 25th, 2023.

Meeting schedule in 2024

Virtual meetings are being held at frequent intervals when scheduling is possible. Presently: January 18th, 2024, February 8th, 2024 and March 5th, 2024

A joint IFCC/LWG is planned to be held in conjunction with the ADLM

Annual meeting in Chicago of 2024.

Publications/conference presentations/webinars

G. Miller has proposed a urine albumin standardization topic for the 2024 ADLM with the following speakers:

1. Afshin Parsa, MD, MPH; The clinical need for standardized urine albumin measurements to manage patients with kidney diseases.
2. Lorin Bachmann, PhD; The current status of clinical laboratory urine albumin measurements.
3. Greg Miller, PhD; The NIDDK/IFCC program to standardize urine albumin measurements.

If accepted this will bring more awareness to the issue of urine albumin standardization.





WG-Growth Hormone (WG-hGH)

Chair: Michel Vos (NL)

Term of reference 1

To establish a higher order Reference Measurement System for enabling hGH standardization of commercial IVDs, encompassing both the development of Reference Materials and a harmonized Reference Measurement Procedure. The RMP should be set-up in at least two calibration labs, and preferentially in a network of calibration labs.

List 2023 accomplishments for this Term of Reference

In 2023, significant strides were made towards a comprehensive comparison between traditional commercial growth hormone (GH) assays and two cutting-edge LC-MS/MS GH methodologies. This endeavour hinged on the unique approach of leveraging a select group of donors who engage in intense physical activity to naturally elevate endogenous GH levels. A pivotal collaboration was established between the University Medical Centre Utrecht's sports department and the Department of Laboratory Medicine. This partnership was instrumental in coordinating events aimed at optimizing exercise regimens to achieve the desired protocol for maximum GH secretion. The goal is to procure serum samples with GH concentrations that are within a measurable range, facilitating accurate comparison studies.

Planned Activities for 2024 for This Term of Reference

The focus for 2024 will be on the meticulous finalization of the exercise protocol, ensuring it effectively induces the optimal GH secretion levels needed for our study. Additionally, a significant effort will be dedicated to collecting a sufficient quantity of serum samples. These samples are crucial for conducting a comprehensive comparison between the established commercial GH assays and the innovative LC-MS/MS methods.

2023 Meetings / conference calls held

Three held in person

Meeting schedule in 2024

Bi-monthly

ADDITIONAL INFORMATION

The major problem with GH as a hormone, is that its secretion is low during the day. To effectively compare methodologies, it is essential to analyse GH across a wide concentration spectrum. Consequently, we depend on healthy young volunteers engaging in physical exercise to obtain samples with varied GH concentrations. However, this approach is not sustainable in the long term due to the considerable effort and financial resources required. Currently, the responsibility of this crucial task falls on a single team member, who dedicates an extensive amount of time and effort to the project. Moving forward, it is imperative that we explore alternative strategies that offer a more sustainable solution.

WG-Standardization of Insulin Assays (WG-SIA), Chair: Randie Little (US), Co-Chair: K. Kabytaev (US)

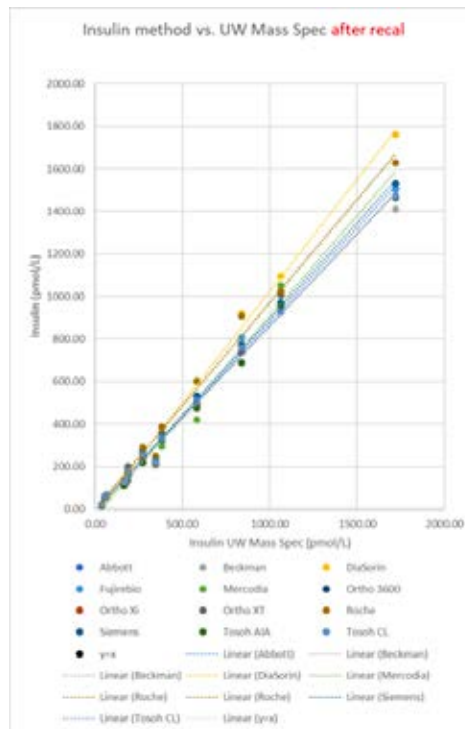
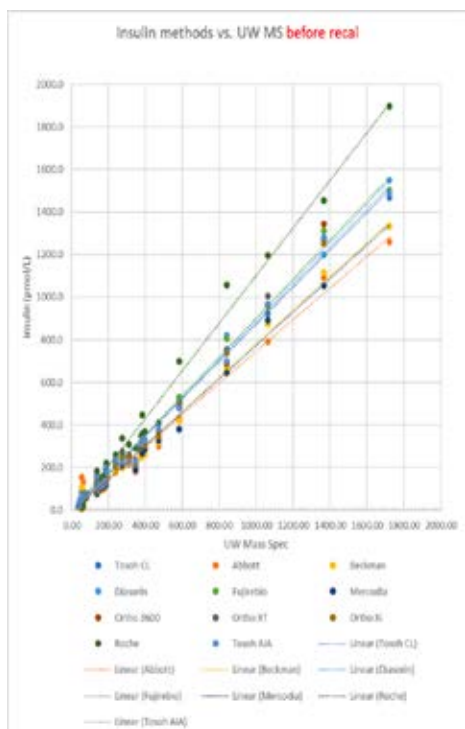
Term of reference 1

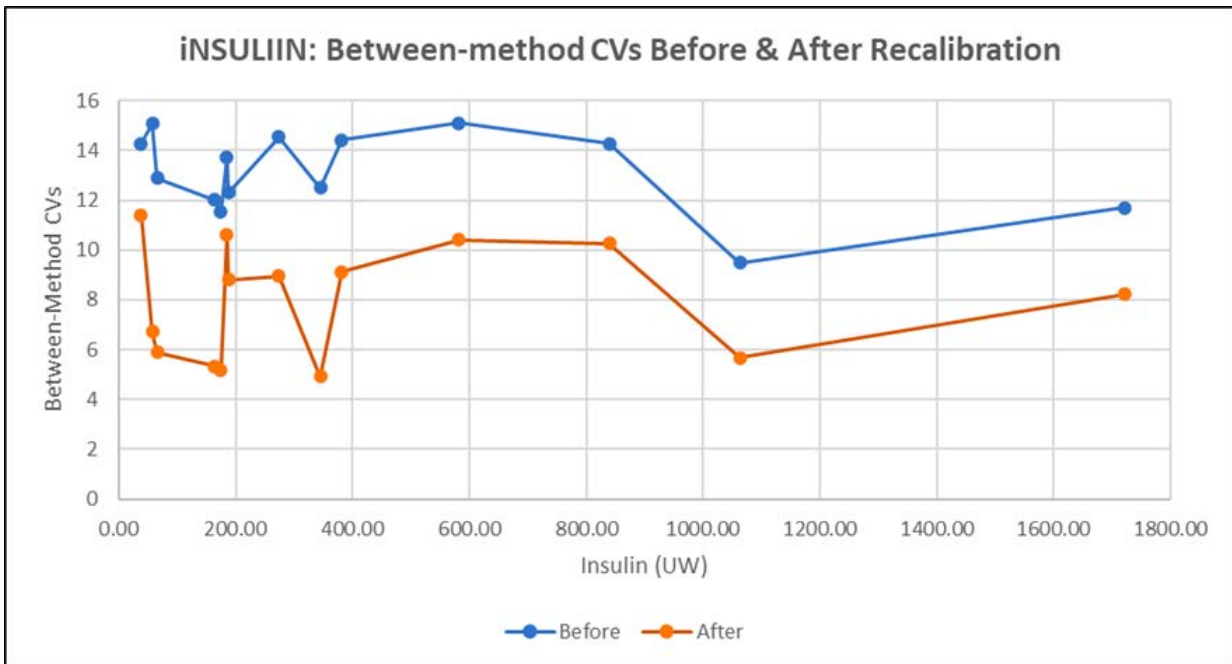
To develop a traceability chain for the standardization of insulin

List 2023 accomplishments for this Term of Reference

We are developing an insulin LC-MS Reference Method. We are currently exploring under-studied alternative pathways for insulin digestion. Despite some technical progress we have yet to optimize our approach for patient samples. We have thoroughly explored all potential sources of loss during our enrichment workflow to improve sensitivity. To enhance sensitivity further, we explored several areas, primarily involving various chemical strategies. Trypsin digestion was evaluated as an alternative to Glu-C. Another strategy involved the use of an oxidized B chain. However, both methods resulted in only modest improvements. For Glu-C digestion, we examined different reducing/alkylating agents (DTT, TCEP, vinyl-Py). Efforts to improve recovery included investigating vial materials and solute compositions (HCl, formic, acetic acids, low-bind, glass, HSA). Additionally, elution conditions for the Q column were assessed.

We have pooled and single-donor serum for use as Secondary Reference Materials. We just completed a study to show that we can reduce variability of insulin assays using these Secondary Reference Materials. We sent 20 of these samples to 9 manufacturers (and a few labs using LC/MS) for analysis of insulin. After receiving manufacturers' results, we sent them the mean of all manufacturer results for each sample. Then we sent a different set of 20 samples for them to analyse after recalibrating their assays based on the relationship from the original set of 20 samples (their method vs all- method mean). There was improvement in variability after recalibration. The graphs below show all the insulin results compared to a mass spec method (not a reference method) before and after recalibration. We hope to see even better results when compared to a reference method.





Our goal will be to compare all results with our insulin reference method as soon as it is available and request that manufacturers send a white paper to their customers describing the relationship with the reference method. When the reference method is ready, substituting the all-mean values with the LC-MS reference values is expected to significantly reduce variability among methods. Our long-term goal is, of course, to have them recalibrate their methods and include this recalibration in their IFU so that laboratories can report results comparable to Reference Method results.

List planned activities in 2024 for this Term of Reference

In 2023 we plan to continue work on the insulin Reference Method with the intention of increasing sensitivity.

2023 Meetings / conference calls held

We had an in-person/virtual insulin Standardization meeting at the Association for Diagnostics and Laboratory Medicine (ADLM) July 26, 2023. In-person attendance was poor.

Meeting schedule in 2024

We will probably have our 2024 meeting virtually in May or June 2024. In the past, virtual meetings have had better attendance.

WG-Standardization of Troponin I (WG-TNI)

Chair: Claudia Swart (DE)

Term of reference 1

Development of a candidate secondary reference measurement procedure and candidate secondary reference material for cardiac troponin I (cTnI)

List 2023 accomplishments for this Term of Reference

PTB and TÜBITAK UME are still improving a potential primary reference measurement procedure. The secondary reference material RM 8121 has been prepared by NIST and University of Maryland School of Medicine (UMSOM). It has been prepared by blending high cTnI samples with samples of healthy individuals to achieve the target concentrations of the four levels of the RM.

RM level	target RV	planned c / (ng/L)	measured* c / (ng/L)	SD / (ng/L)	CV / %	% range
A	LoQ < x < 99%ile URL female	20	17.13	0	0.0	0
B	1.3 x 99%ile URL male	69	76.6	0.88	1.1	2.5
C	5 x 99%ile URL male	265	298.6	12.07	4.0	9.3
D	60 x 99%ile URL male	3180	3386	81.22	2.4	5.5

The outcome was over 3000 vials of material for each of the four concentration levels of RM 8121, over 12000 vials in all which are now stored in a freezer at NIST.

List planned activities in 2024 for this Term of Reference

The RM 8121 will be characterised regarding homogeneity and stability in parallel to the commutability study planned for 2024. The commutability study is currently prepared (see ToR 2).

C. Swart will present the work of the WG at the IFCC symposia APFCB Sydney in November 2024.

Term of reference 2

Testing for cTnI standardization and clinical validation by comparison with validated commercial assays in a round robin study

List 2023 accomplishments for this Term of Reference

To show that standardisation of cTnI measurements is possible, a commutability study is currently organised by the WG. A list of FDA cleared high sensitivity cTnI assays for the commutability study has been established in cooperation with the cooperate members, including:

- ARCHITECT STAT i1000SR hs-cTnI (Abbott)
- ARCHITECT STAT i2000SR hs-cTnI (Abbott)
- Alinity i (Abbott)
- Access 2 hs-cTnI (Beckman Coulter)



- UniCel Dxl (Beckman Coulter)
- VIDAS hs-cTnI (bioMerieux)
- Pylon cTnI (ET Healthcare)
- PATHFAST cTnI-II (LCI Medisense)
- VITROS hsTroponinI (Ortho)
- ADVIA Centaur TNIH (Siemens Healthineers)
- Atellica IM TnIH (Siemens Healthineers)
- Dimension EXL hs-cTnI (Siemens Healthineers)
- Dimension VISTA hs-cTnI (Siemens Healthineers)
- Atellica® VTLi hs cTnI (Siemens Healthineers)
- Assay from Radiometer still under discussion

A draft of the commutability study protocol has been prepared and is currently in the process of approval within the WG.

List planned activities in 2024 for this Term of Reference

During the online meeting in March 2024, the finalisation of the commutability study protocol is planned followed by the submission to SD.

During 2024 the commutability study is planned to be executed and reported. 30 clinical samples of 50 mL each of either plasma or whole blood are currently collected from single donors at UMSOM. The samples were chosen so that the concentrations cluster around the various levels of the NIST RM 8121. All clinical samples have been assessed for their concentration level using the Atellica hsTnI immunoassay at the UMSOM laboratory. The samples were frozen at -80 °C directly after collecting. As all platforms named above are available in R. Christenson's laboratory at UMSOM, it is currently planned to make all measurements in this laboratory, if the WG agrees. Otherwise, aliquots of 0.7 mL of each sample will be provided to participating laboratories. NIST and UMSOM (study organisers) will provide the sets of test materials. The number of sets provided will depend on the number of IVD methods applied by the laboratory and the sample volume needed for the measurements. One set of test materials consists of 30 clinical samples and the four levels of the NIST RM 8121.

A session on standardisation of cTnI measurements at the ADLM meeting in Chicago in July 2024, proposed by R Christenson, has been accepted. R. Christenson, M. Lowenthal and C. Swart will present the work of the WG including the results of the commutability study, if already available and approved by the WG, in three presentations during this session.

2023 Meetings / conference calls held

Hybrid meeting during IFCC Wordlab in Rome in May 2023

Online meetings in August and December 2023

Regular meetings of WG Chair with the organisers of the commutability study, K. Phinney and M. Lowenthal (NIST) and Rob Christenson (UMSOM), at least once a month

Meeting schedule in 2024

Online meeting in March 2024

When possible, hybrid meeting during ADLM meeting in July in Chicago

Additional online meetings as necessary for the execution of commutability study

WG– Harmonisation of Autoantibody Testing (WG-HAT),

Chair: Dr Joanna Sheldon (UK)

Term of reference 1

The production of certified reference materials for the quantification of autoantibody concentrations – IgG antibodies to beta-2 glycoprotein 1.

List 2023 accomplishments for this Term of Reference

The reference material for anti beta2 glycoprotein 1 antibodies has been value assigned in IU through the WHO (via NIBSC). ERM-DA477/IFCC. Despite this material being available, there has been limited adoption by the diagnostic companies. Never the less, Liesbet Deprez has been working with Prof PierLuigi Meroni (an expert in this field) looking at how use of the reference material may improve harmonisation of the results of patient samples in the quantification of IgG anti beta2 glycoprotein 1 antibodies. Preliminary data looks promising but we will continue working on this aspect in the hope that it will encourage companies to adopt this material.

List planned activities in 2024 for this Term of Reference

To continue to work with Liesbet Deprez at the JRC and Prof Meroni at University of Milan to demonstrate harmonisation of the patient results if ERM-DA477/IFCC I used.

Term of reference 2

The production of certified reference materials for the quantification of autoantibody concentrations in Coeliac disease.

List 2023 accomplishments for this Term of Reference

The reference material for coeliac antibodies has been prepared and is commutable and designated EURM487/IFCC for anti-tissue transglutaminase IgA and IgG antibodies. We are therefore working with NIBSC for value assign in IU through the WHO.

List planned activities in 2024 for this Term of Reference

All in house measurements at the JRC will be completed by the end of Feb 2024. The draft report and data analysis will be completed by the JRC by the end of March 2024. The review period of the MHRA is April-May 2024 then the JRC will write the report with the draft going to external review at the end of June 2024 and finally the presentation at the WHO ECBS in October 2024.

Liesbet Deprez at the JRC is leading this process.

Term of reference 3

The production of certified reference materials for the quantification of autoantibody concentrations – IgG anti Glomerular Basement Membrane





List 2023 accomplishments for this Term of Reference

The raw material has been sourced and is with the JRC. The documentation relating to consent that this may be used for the preparation of reference material for the overall benefit to patients has been received. This material will be designated EURM484/IFCC anti GBM IgG.

List planned activities in 2024 for this Term of Reference

The plan is for the material to be processed in February -March 2024 with homogeneity and short term stability testing planned for April 2024. The draft report proposing the anti GBM project will be submitted to the WHO ECBS meeting in October 2024. Long-term stability testing should be complete by March 2025 will full characterisation and commutability testing completed in April 2025. Providing these studies are all acceptable, the final approval should be ready at the October 2025 meeting of the WHO ECBS.

2023 Meetings / conference calls held

05.01.2023 – meeting with JRC and NIBSC (virtual)

22.05.2023 – meeting with JRC at IFCC Rome

11.09.2023 - meeting with JRC (virtual)

12.02.2024 - meeting with JRC (virtual)

19.02.2023 – meeting with JRC, Prof Meroni and team and Prof Rohan Willis (virtual)

PUBLICATIONS/CONFERENCE PRESENTATIONS/WEBINARS

Liesbet Deprez presented an abstract for World Euromedlab in Rome

Joanna Sheldon co-chaired and presented at the Autoimmune Diseases symposium at World Euromedlab in Rome

WG – FOR BIOMARKERS OF NEURODEGENERATIVE DISEASES (former CSF Proteins) (WG-BND), Chair: Johan Gobom (SE)

No report received for Annual Report; no recent update received.

WG – Commutability in Metrological Traceability (WG-CMT)

Chair: Greg Miller (US)

Term of reference 1

Advise IFCC Committees and Working Groups on how to assess the commutability of materials on which they are working.

List 2023 accomplishments for this Term of Reference

None have asked for assistance.

List planned activities in 2024 for this Term of Reference

As needed.

Term of reference 2

Establish procedures to use commutable reference materials, and to correct for non-commutability bias, in a metrological traceability hierarchy.

List 2023 accomplishments for this Term of Reference

See publication 1 from 2020 and note 3 earlier publications in 2018 that address assessing commutability.

Also see publication 2 reporting on a JCTLM workshop co-organized by SD and WGCMT members along with representatives from JCTLM and ICHCLR.

List planned activities in 2024 for this Term of Reference

Considering a review paper on commutability assessment to bring the series of publications on the topic into a coherent overall system. Note that ISO TC212 is developing a proposal for a similar standard on commutability assessment. Will determine if two similar documents are needed.

Term of reference 3

Establish how to define the criterion for acceptable commutability that is required for a given reference material, taking into account its intended use in a metrological traceability hierarchy or for surveillance of harmonization/standardization status of results from different measurement procedures.

List 2023 accomplishments for this Term of Reference

See publications 3 and 4. Publication 4 also includes a new approach for assessing commutability of EQA materials.

List planned activities in 2024 for this Term of Reference

One manuscript has been submitted to Statistics in Biopharmaceutical Research: Fauskanger PK, Sandberg S, Johansen J, Keller T, Budd J, Miller WG, Stavelin A, Delatour V, Panteghini M, Stove B. Quantification of difference in non-selectivity between in vitro diagnostic medical devices. This manuscript develops the statistical approach for nonselectivity assessment and criterion for assessing commutability in EQA materials that was applied in publication 4.

This term of reference is complete.

Term of reference 4

Provide recommendations on verifying commutability for replacement batches of a reference material.

List 2023 accomplishments for this Term of Reference

Recommendations are under active development.

List planned activities in 2024 for this Term of Reference

Continue developing recommendations for verifying commutability for replacement batches of a reference material.

2023 Meetings / conference calls held

All virtual zoom meetings: Jan 11, Jan 17, Mar 8, Mar 27, Jun 23, Jul 5, Aug 29, Sep 7, Sep 13, Oct 24, Nov 27.



Publications/conference presentations/webinars

Miller WG, Budd J, Greenberg N, Weykamp C, Althaus H, Schimmel H, Panteghini M, Delatour V, Ceriotti F, Keller T, Hawkins D, Burns C, Rej R, Camara JE, MacKenzie F, van der Hagen E, Vesper H, for the IFCC Working Group on Commutability. IFCC Working Group Recommendations for Correction of Bias Caused by Noncommutability of a Certified Reference Material Used in the Calibration Hierarchy of an End-User Measurement Procedure. Clin Chem 2020;66:769-78.

Miller WG, Myers G, Cobbaert CM, Young IS, Theodorsson E, Wielgosz RI, Westwood S, Maniguet S, Gillery P. Overcoming challenges regarding reference materials and regulations that influence global standardization of medical laboratory testing results. Clin Chem Lab Med 2022;61:48-54.

Miller WG, Greenberg N, Panteghini M, Budd JR, Johansen JV for the IFCC Working Group on Metrological Traceability in Laboratory Medicine. Guidance on which calibrators in a metrologically traceable calibration hierarchy must be commutable with clinical samples. Clin Chem 2023;69:228-38.

Miller WG, Keller T, Budd J, Johansen JV, Panteghini M, Greenberg N, Delatour V, Ceriotti F, Deprez L, Rej R, Camara JE, MacKenzie F, Lyle AN, van der Hagen E, Burns C, Fauskanger P, Sandberg S, for the IFCC Working Group on Commutability in Metrological Traceability. Recommendations for setting a criterion for assessing commutability of secondary calibrator certified reference materials. Clin Chem 2023;69:966-75.

Sandberg S, Fauskanger P, Johansen JV, Keller T, Budd J, Greenberg N, Rej R, Panteghini M, Delatour V, Ceriotti F, Deprez L, Camara JE, MacKenzie F, Lyle AN, van der Hagen E, Burns C, Miller WG, for the IFCC Working Group on Commutability in Metrological Traceability. Recommendations for setting a criterion and assessing commutability of sample materials used in external quality assessment/proficiency testing schemes. Clin Chem 2023;69:1227-37.

WG - Immunosuppressive Drugs (WG-ID),

Chair: Christoph Seger (CH) until Dec 2023,

incoming Chair: Caroline Stobe (DE), as of Jan 2024

Statement of the outgoing chair (Christoph Seger) 2023

The WG-ID is continuing its efforts to establish and document the metrological traceability of the clinically necessary immunosuppressant measurements. At present, it must be noted that the liability-binding assays ("immunoassays") exhibit a significant error contribution (bias) resulting from inter- and intra-individual differences in metabolite contributions to the measurement result (cross reactivity of the diagnostic antibodies).

In the field of mass spectrometry, it is noted that there are still insufficient reference materials, which can lead to calibration bias contributions. A reference measurement procedure has been published (Taibon et al 2020) and JCTLM listed, but a reference measurement service is currently still not available.

The outgoing chair strongly objects the listing of the WG-ID measurands in the ICHCLR "Harmonization" web presentation. The chair objected this issue already in 2022 and now reiterates this objection. Harmonization is not the alternative to metrological traceability to be followed in the case of well definable (SI traceable) measurands. Measurement principles showing limited selectivity towards the measurand, e.g., by including fractions of biologically formed measurand metabolites into the measurement result, must not be harmonized with measurement principles avoiding such interferences. Key argument: It has been shown

frequently, that for immunosuppressive drugs, the metabolisation rate and the metabolite concentrations show high inter- and intraindividual variabilities. A fixed factor correction as envisioned in harmonization is therefore not feasible.

Summary of Measurand Harmonization Activities

The measurand table is a dynamic information resource. Check regularly for new information.

Click on a measurand to see additional information regarding harmonization status and medical impact.

Click on a link (blue text) for information on a resource or organization.

Click on a single column to sort the table.

Download as PDF	Copy data	Print	Search: tacr		
Measurand	Matrix	Medical Impact of Harmonization	Harmonization Status	Resources	Organization
Tacrolimus	Blood	High	Active	JCTLM LGC	IFCC Working Group on Immunosuppressive Drugs
Showing 1 to 1 of 1 entries (filtered from 143 total entries)					Previous 1 Next

<https://www.harmonization.net/measurands/>

Statement of the incoming chair (Caroline Stobe) 2024

Based on the 2019 WG-ID document the terms of reference are:

Term of reference 1 Regulatory framework for submission of methods and materials to JCTLM

Term of reference 2 Measurement comparison initiative

Term of reference 3 Production of reference materials

Term of reference 4 Establishment of reference methods

Term of reference 5 Establishment of reference procedures

2023 accomplishments:

Terms of reference 1 and 4 have been fully accomplished (Taibon et al 2020).

Term of reference 2 is still pending. It has been discussed during the meeting at EuroMedLab 2022 (Munich) and 2023 (Rome) that sample material for a comparison could be provided by MHH (WG-ID member D. Grote-Koska) and distributed by RfB (WG-ID member A. Kessler). However, organizing a comparison seems only reasonable if term of reference 5 is accomplished.

Term of reference 3 no longer falls within the scope of this WG: the production of primary/secondary reference materials is understood as the realm of NMIs. The WG-ID cannot produce such materials. However, the WG-ID supports the qNMR based approach for primary reference material characterization.

Term of reference 5 is only partly accomplished: while Taibon et al developed and JCTLM listed an RMP in 2020, there are still no other reference laboratories running the RMP. Currently, none of the WG members has the financial or operational freedom to establish the RMP without further ado. Fundraising is necessary with the objective to establish a network of reference services for ID (in the style of eg the IFCC Network for Standardization of HbA1c)



Planned activities in 2024:

The first six months shall be used to review and consolidate the WG's terms of reference and the tasks needed to accomplish these. As part of this process, all listed members will be contacted to inquire whether they still wish to contribute to the WG and, if so, in which way they wish to do so. Additionally, an in-person meeting is planned during the IFCC WorldLab 2024 in Dubai.

Some members of the WG-ID are partners in the project "Manufacturing of commutable calibrators and quality control materials for standardisation and post-market surveillance of IVD tests (COMET)" starting in September 2024. One task of the project is dedicated to automation of a multiplexed RMP for ID. It has been agreed with the coordinator of COMET (V. Delatour) to confer with WG-ID and, if possible, coordinate joint efforts to further the establishment of RMPs for ID.

2023 Meetings / conference calls held

In-person meeting at IFCC WorldLab in Rome.

Meeting schedule in 2024

In-person meeting at IFCC WordLab in Dubai

WG - Apolipoproteins by Mass Spectrometry (WG-APO MS),

Chair: L. Renee Ruhaak (NL)

Term of reference 1

To achieve standardization of a panel of clinically relevant serum apolipoproteins (apo) A-I, B, C-I, C-II, C-III, E and apo (a) (including qualitative phenotyping where needed). Standardization is done in such a way that measurement results are traceable to SI as outlined in ISO 17511. Other traceability chains will be used in cases where traceability to SI cannot be achieved.

2023 accomplishments for this Term of Reference

Reference measurement procedure

The reference measurement procedure has been published for all 7 apolipoproteins and for apo E phenotyping using provisional serum based calibration. The group focussed on the establishment of SI traceability through peptide-based calibration. Multiple experiments have been performed to identify optimal conditions for the preparation of peptide-based calibrators, providing stable results. These include the use of a delipidated serum matrix, the addition of the peptides at the start of the procedure and the use of peptide solutions with 30% acetonitrile.

However, as the peptide-based calibration provides significantly different results compared to the serum protein based calibration, we had to reconsider the feasibility of peptide-based calibration by the end of 2023. As a plan B, first experiments were performed using an alternative recombinant human apo(a) approach, and feasibility of this strategy for calibration of the RMP for apo(a) will be further evaluated in Q1 and Q2 2024.

Establishing a network of calibration labs running the same harmonized RMP

A first full draft of a manuscript on the level of harmonization between the three calibration laboratories has been prepared and is currently under review by the members of the WG and SD. The manuscript is planned to be submitted in Q1 2024 to Clinical Chemistry.

A protocol to aid IVD manufacturers in the transition of apo(a) measurements to nmol/L units, with an extended measurement range, and traceability to the former SRM2B is currently in preparation. Value assignments of clinical samples used in EQA surveys are performed for CDC (US) and SKML (Netherlands), among others.

Reference materials

Primary RMs for apo(a)

As the peptide-based calibration strategy had to be deserted, new primary reference materials have to be sourced. For apo(a) a potential source has been identified and is under consideration and evaluation.

Secondary RMs for apo(a)/Lp(a)

A stability study has been designed by JRC and performed to assess the influence of freeze-thaw cycles on the commutability of the secondary matrix based reference materials for apo(a) standardization. The results indicate that freeze/thaw cycles do influence the recovery of the secondary matrix-based reference materials especially in case of immunoassay-based Lp(a)/apo(a) methods, signifying that already one F/T cycle affects commutability. Consequently, it is essential to find a supplier on the European continent, located closely to JRC, Belgium to reduce the number of F/T cycles to only one F/T step, i.e. after production of the secondary RMs. Collaboration with an alternative supplier in the Netherlands is very constructive, but legal/ethics measures have to be put in place before further action can be taken regarding the selection of donors, blood donations in selected donors, and the production of the matrix based secondary reference materials.

Secondary RMs for apoAI and B

For apoAI and apo B a first commutability study to assess the suitability of matrix-based candidate reference materials has been performed; the first data has been reported, and final data is expected in Q1 2024, followed by a draft manuscript.

Planned activities for 2024 for this term of reference

It will be decided whether recombinant protein based calibration to achieve SI-traceability of the apolipoprotein test results should be further assessed (yes/no) before the end of February 2024.

If this strategy is selected, production of the primary RM should commence as quickly as possible, to allow for the full calibration strategy for the apo(a) RMS to be in place by Q2 2024, followed by analytical validation in Q3 2024.

The influence of free/fragmented apo(a) on both LC-MS and IA methods will be evaluated to determine if free/fragmented apo(a) could cause discrepant results between LC-MS and IA-based results. Finalization of this activity is planned for Q3 2024.

The protocol to aid IVD manufacturers in documenting the effect of transitioning towards nmol/L and recognizing the limitations of immunoassay-based tests at the high concentration end, will be operational in Q2 2024.

Initiation of the preparation of a technical dossier for submission of the RMP to JCTLM is planned for Q1 2024. Submission of the RMP to JCTLM is foreseen in the round of 2025 (May 2025).

Screening and selection of donors for the production of secondary reference materials for apo(a) is envisioned for Q2 2024 with an accredited Dutch EQA-material provider who can accomplish only one F/T cycle. JRC will study the different storage conditions in order to select the most optimal procedure which ideally does not affect commutability of the materials.



Production of secondary reference materials for apo(a) is envisioned for Q2-Q3 2024. The initiation of the production of the secondary reference materials for apoA-I and apoB is also envisioned for 2024. Secondary reference materials will also have to be produced for apolipoprotein Cs and E. This process will commence Q3 2024.

An IFCC symposium session on the quantitation of serum apolipoproteins for the sake of precision diagnostics has been approved and will be organized and chaired by members of the WG at World lab Dubai in May 2024.

Term of reference 2

To evaluate clinical performance and clinical utility of serum apolipoprotein panel(s) for CVD risk stratification and treatment, in comparison to or together with contemporary blood lipids.

2023 accomplishments for this Term of Reference

A first data analysis was conducted to assess potential differences between apo(a) measurement techniques. This was published in Circulation, and presented at the EAS conference 2023 as a poster. Data analysis to assess the clinical value of apolipoprotein measurements is ongoing.

Planned activities for 2024 for this term of reference

According to the cyclical EFLM test evaluation framework the clinical utility of the baseline serum apolipoprotein profile -on top of the lipid profile- will be evaluated. Especially its relation with patient outcome is under investigation in a prospective cohort study in 6500 obese participants as well as in an RCT with > 20 000 ACS patients.

ADDITIONAL INFORMATION

A robust RMP has been developed for 7 apolipoproteins. The RMP is IFCC-endorsed and published in Clin Chem.

To complete the RMS, primary and secondary RMs have to be selected and evaluated.

The selection and manufacture of suitable primary and secondary reference materials is quite challenging. This WG took firm decisions at the end of 2023 and currently alternative trajectories are now under exploration.

The calibration network with 3 calibration labs has prepared a publication on the network performance. The publication is currently under review of WG- and SD-members, and will be submitted in March 2024.

Overall this WG steers undisturbed a complex standardization project and encountered, especially for apo(a), multiple challenges which have to be considered and overcome. The WG is resilient and further walks the path, with alternative solutions.

2023 MEETINGS / CONFERENCE CALLS HELD

A face to face meeting was held at the occasion of Worldlab 2023 in Rome, Italy on Tuesday May 23rd, 8:30-13:00h.

In addition, six virtual meetings were held in 2023:

Thursday 19 January 2023

Thursday 16 March 2023

Thursday 29 June 2023

Thursday 7 September 2023

Thursday 19 October 2023

Thursday 21 December 2023

MEETING SCHEDULE IN 2024

An in-person meeting is scheduled at the occasion of Worldlab 2024 in Dubai, UAE:

Tuesday May 28th 2024, 8:30-13:00h.

Virtual meetings have been planned for:

Thursday 15 February 2024

Thursday 14 March 2024

Thursday 18 April 2024

Monday 1 July 2024

Thursday 12 September 2024

Thursday 17 October 2024

Thursday 14 November 2024

Thursday 19 December 2024

ADDITIONAL INFORMATION

After facing subsequent peptide-based calibration attempts with insufficient recoveries, the working group had to conclude that peptide-based calibration of the RMP was not feasible. An alternative had to be sought. This has been identified and the group is committed to establishing this alternative primary RM in 2024.

Similar challenges occurred with the secondary RM from Salomon Park. The secondary RMs all undergo 2 F/T cycles inherently due to the required transatlantic collection and transport by this provider, which leads to non-commutable behaviour of the secondary RM across routine methods (which is unacceptable).

Publications/conference presentations/webinars

Outreach

Manuscripts have been published in peer-reviewed journals:

- **Development of an LC-MRM-MS-Based Candidate Reference Measurement Procedure for Standardization of Serum Apolipoprotein (a) Tests**, L Renee Ruhaak, Fred P H T M Romijn, Ilijana Begcevic Brkovic, Zsuzanna Kuklennyik, Julia Dittrich, Uta Ceglarek, Andrew N Hoofnagle, Harald Althaus, Eduardo Angles-Cano, Stefan Coassin, Vincent Delatour, Liesbet Deprez, Ioannis Dikaïos, Gerhard M Kostner, Florian Kronenberg, Alicia Lyle, Urban Prinzing, Hubert W Vesper, Christa M Cobbaert on behalf of the International Federation of Clinical Chemistry and Laboratory Medicine Working Group Apolipoproteins by Mass Spectrometry, *Clinical Chemistry*, Volume 69, Issue 3, March 2023, Pages 251–261, <https://doi.org/10.1093/clinchem/hvac204>
- **Commutability Assessment of Candidate Reference Materials for Lipoprotein(a) by Comparison of a MS-based Candidate Reference Measurement Procedure with Immunoassays**, Ioannis Dikaïos, Harald Althaus, Eduardo Angles-Cano, Uta Ceglarek, Stefan Coassin, Christa M Cobbaert, Vincent Delatour, Benjamin Dieplinger,

Matthias Grimmmer, Andrew N Hoofnagle, Gerhard M Kostner, Florian Kronenberg, Zsusanna Kuklenyik, Alicia N Lyle, Urban Prinzing, L Renee Ruhaak, Hubert Scharnagl, Hubert W Vesper, Liesbet Deprez on behalf of the IFCC Working group on Apolipoproteins by Mass Spectrometry (WG-APO MS), Clinical Chemistry, Volume 69, Issue 3, March 2023, Pages 262–272, <https://doi.org/10.1093/clinchem/hvac203>

- **Developing an SI-traceable Lp(a) reference measurement system: a pilgrimage to selective and accurate apo(a) quantification**, Nina M Diederiks, Yuri E M van der Burgt, L Renee Ruhaak, Christa M Cobbaert, Crit Rev Clin Lab Sci 2023 Nov;60(7):483-501. doi: 10.1080/10408363.2023.2199353.
- **Relating Lipoprotein(a) Concentrations to Cardiovascular Event Risk After Acute Coronary Syndrome: A Comparison of 3 Tests**, Szarek M, Reijnders E, Jukema JW, Bhatt DL, Bittner VA, Diaz R, Fazio S, Garon G, Goodman SG, Harrington RA, Ruhaak LR, Schwertfeger M, Tsimikas S, White HD, Steg PG, Cobbaert C, Schwartz GG; ODYSSEY OUTCOMES Investigators. Circulation. 2024 Jan 16;149(3):192-203. doi: 10.1161/CIRCULATIONAHA.123.066398.
- **An LC-MS-based designated comparison method with similar performance to the Lp(a) reference measurement procedure to guide molar Lp(a) standardization**. Diederiks NM, Ruhaak LR, Romijn FPHTM, Pieterse MM, Smit NPM, Cobbaert CM. Clin Proteomics. 2024 Jan 24;21(1):5. doi: 10.1186/s12014-023-09446-5.
- **Next-generation apo(a) standardization: why, when and how?**, Ruhaak LR and Cobbaert CM, Clin Lab Int 2023



Several conferences have been attended, and presentations have been given:

- Transferability and harmonization potential of an LC-MS based candidate reference measurement Procedure for apolipoprotein (a), **21-25 May, World Lab, Rome, Italy (Poster)**
- Analytical validation and the road towards SI-traceability of an LC-MS based cRMP for apo(a), **21-25 May, World Lab, Rome, Italy (Poster)**
- Atheronet COST annual meeting - Standardization of clinical chemistry apolipoprotein measurements: Why, how and when? **28 September, Vlora, Albania, oral**
- DKLM annual meeting - MS-based protein quantification: The quest for doing it right, **13 October, Mannheim, Germany, oral**
- **12th International Palestinian Conference for Laboratory Medicine**, Palestinian Medical Technology Association (PMTA), 24-26 August 2023, Introducing Cardiovascular Precision Diagnostics in the 21st century: ready for Prime Time?
- **VirtuaLAB 2023** Fundación Bioquímica Argentina, September 2023 - Introducing Cardiovascular Precision Diagnostics in the 21st century: ready for Prime Time?
- **EFLM webinar, 6 December 2023**, entitled: Coronary Artery Disease -Predicting the development of coronary artery disease in apparently healthy individuals -the role of Lp(a). www.eflm-elearning.eu

WG – Pancreatic Enzymes (WG-PE), Chair: Antje Staaden (DE)

Term of reference 1

Development of a primary reference method for pancreatic amylase in serum

List 2023 accomplishments for this Term of Reference

- reference range determination (preliminary) and method comparison to Roche Cobas8000
- Rome, EuroMedlab: presentation to IVD representatives (Roche, Abbot, Beckman, Siemens)
- Investigations performed in Hanover:
 - MU – sensitivity coefficient of mAb concentration
 - stability of solution R
 - interference by analgetic drugs
 - pH dependence on temperature (solution 2 mAb)
 - reproducibility: pre experiment
 - oreproducibility: preparation of isoenzyme stock solutions
- draft started for publication (see below)

List planned activities in 2024 for this Term of Reference

Publication as Part 8: IFCC primary reference measurement procedure of enzymes. Currently in process.

Term of reference 2

Support EC-JRC (Joint Research Centre, Directorate F – Health, Consumers and Reference Materials, formerly IRMM) in studies and certification of reference materials for enzymes

List 2023 accomplishments for this Term of Reference

In 2023, a stability monitoring study of the reference material ERM AD456 (Amylase) was supported by the RfB calibration laboratory in Hanover for EC-JRC.

List planned activities in 2024 for this Term of Reference

Measurements for the commutability study of ALP candidate reference materials

2023 Meetings / conference calls held

WG-PE Meeting at the EuroMedLab/WorldLab, Rome, May 23rd, in person (+ virtual attendance of some WG-PE members and IVD representatives)

Publications/conference presentations/webinars

A publication as Part 8: IFCC PRMP of pancreatic amylase at CCLM is targeted for 2024.





WG - Faecal Immunochemical Testing (WG-FIT), Chair: Carolyn Piggott (UK)

Term of reference 1

To harmonise and/or standardise analysis of haemoglobin in faecal samples by immunochemistry (FIT)

List 2023 accomplishments for this Term of Reference

We have continued to make progress with this project. At a meeting of the FIT Working Group in January 2023 it was proposed that the linearity of four FIT methods should be checked before deciding whether the methods could be harmonised. A protocol was written by Liesbet Deprez from the European Commission Reference Materials Unit in Geel, with expert input from Marieke Frasa and Eline van Der Hagan from the Netherlands. The work was carried out at the bowel cancer hub in Guildford by Carolyn Piggott and Shane O'Driscoll, overseen by Sally Benton and Liesbet Deprez. The results were presented at the next meeting of the main working group. Additional lab work was carried out in 2023 and meetings held to discuss the results. This project continues to present challenges due to the nature of faecal samples and the instability of Hb in faeces, and hence is a lengthy process.

List planned activities in 2024 for this Term of Reference

Further plans for the harmonisation work will be discussed at a meeting of the subgroup in February 2024, and with the main working group in April or May 2024.

Term of reference 2

To establish EQA and 3rd party IQC programmes

List 2023 accomplishments for this Term of Reference

EQA: a subgroup was set up from 13 members of the main FIT working group. A questionnaire was put together by members of the group and circulated in November/December to EQA scheme organisers worldwide with a FIT programme. The survey included questions to establish how different schemes work with regard to preparation and circulation of samples, and reporting of results to users. There was a good response to the survey.

IQC: In December an internet search for 3rd party IQC programmes was carried out and potential manufacturers/suppliers contacted. There are at least 2 manufacturers who are planning to produce material, though unfortunately currently none yet available to FIT users.

List planned activities in 2024 for this Term of Reference

EQA: the results from the EQAS questionnaire will be discussed in February 2024, plans made for any further work and to publish the results.

IQC: findings from 2023 search will be discussed at the next meeting of main working group in April/May 2024.

Term of reference 3

To determine the feasibility of developing reference materials and/or commutable calibrators

List 2023 accomplishments for this Term of Reference

This topic has been discussed during meetings of the main working group and the harmonisation subgroup, though due to laboratory work in 2023 to establish whether harmonisation is an

option, there hasn't yet been any progress to explore the development of reference materials or commutable calibrators.

List planned activities in 2024 for this Term of Reference

Discussions will take place in 2024 with meetings of the harmonisation subgroup and the main working group, and meetings with manufacturers to explore the production of commutable calibrators.

Term of reference 4

The IFCC FIT-WG can provide recommendations and guidance on pre-analytical and analytical aspects of FIT

List 2023 accomplishments for this Term of Reference

There have been several enquiries to the working group regarding the availability of 3rd party QC/IQC and the availability of EQAS.

List planned activities in 2024 for this Term of Reference

None planned currently.

2023 Meetings / conference calls held

05/01/2023 FIT working group (virtual)

24/04/2023 FIT harmonisation subgroup (virtual)

17/05/2023 FIT harmonisation subgroup (virtual)

23/05/2023 FIT working group (in person)

13/07/2023 FIT EQA subgroup (virtual)

09/10/2023 FIT EQA subgroup (virtual)

11/12/2023 FIT harmonisation subgroup (virtual)

Meeting schedule in 2024

19/02/2024 FIT EQA subgroup (virtual)

29/02/2024 FIT harmonisation subgroup (virtual)

March 2024 FIT harmonisation subgroup (virtual)

May 2024 FIT working group (virtual)

October 2024 FIT working group (in person)

Others as required

Publications/conference presentations/webinars

Publication: Method comparison and commutability study among four faecal immunochemical tests (FIT) systems. Deprez L, Piggott C, van der Hagen E, Frasa M, Benton S, on behalf of the IFCC working group on faecal immunochemical testing. CCLM 2023; 62(1):50-59.

Posters: Method comparison and commutability study among four faecal immunochemical test systems: Euromedlab 2023, Rome, Italy & IBMS Congress Birmingham UK.





The functional group is working effectively and meeting objectives. There are currently 24 members of the main working group, and there were 2 well attended meetings of the group in 2023, which led to:

- The FIT EQAS subgroup being set up in July 2023 with 13 members, a questionnaire has been produced and sent to EQAS worldwide, with responses completed and ready to discuss the next steps of report production.
- Potential companies to provide 3rd party IQC have been reviewed and contacted
- The harmonisation subgroup (5 members) is also working consistently towards meeting the objective, with lab work to assess method linearity carried out in 2023 and several discussions with the subgroup members and FIT manufacturers. The next steps of this project are being discussed with further meetings planned for 2024.

WG - Cell free DNA and related circulating biomarkers (WG-cfDNA), Chair: Ron HN van Schaik (NL)

Term of reference 1

To identify and provide guidance on preanalytical and analytical aspects for obtaining good and reproducible results for cfDNA and related circulating biomarkers for clinical use, and to guide the correct clinical implementation of these biomarkers.

List 2023 accomplishments for this Term of Reference

Organized a cfDNA session on the European Society for Pharmacogenomics and Personalised Medicine (ESPT) in Copenhagen (Nov 25-27, 2023), with speakers Prof Klaus Pantel (GER), Prof Klaus Lindbjerg Andersen(DEN) and Prof Catherine Alix Panabieres (FRA); congress under IFCC auspices

Organized the 5th cfDNA symposium (Houten, Netherlands) (June 9, 2023)

Organized the cfDNA session at IFCC Worldlab in Dubai (May 26-30, 2024), with speakers Prof Klaus Pantel (GER) and Dr Marzia del Re (ITA).

List planned activities in 2024 for this Term of Reference

Recruit new membership and new chair of the working group

Reflect on terms of reference and adjusting them

ADDITIONAL INFORMATION

The chair participated in the ctDNA Expert Working group in Barcelona (Oct 5-6)

The chair attended the ELBS Liquid Biopsy meeting in Rome (Nov 9-10)

Although all members are very active in the field, the joint efforts of the WG are currently limited. This is due to the strong uptake of cfDNA by Pathology and the many activities organized by other, specialized organizations, a.o. the new European Society on Liquid Biopsy (ELBS). Several important guidelines on preanalytical aspects were published by these groups in a.o. Clin Chem. The WG realized that producing our own, independent guidelines, would bring confusion to the field. Therefore, it was chosen strategically not to compete with the other guidelines, yet to focus on organizing educational sessions at congresses in order to inform IFCC members on the progress in the cfDNA field. As such, the terms of reference may need to be adjusted



In the last meeting, the WG indicated that broadening the scope of the current WG could be beneficial, to include also circulating tumor cell analyses, exosome and miRNA analyses. A suggestion was put forward that a new working group could be formed on “Liquid Profiling of Molecular Targets” in case IFCC would also be supportive on continuing having a WG in this field. The WG indicates that it is important to seek collaboration with European (or wider) initiatives that are currently active in the field, such as the European Society of Liquid Biopsy (ELBS), chair Klaus Pantel (speaker at the ctDNA session in the IFCC Wordlab in Dubai), which has two members of the IFCC WG-ctDNA as members (Evi L and Ron van Schaik).

Publications/conference presentations/webinars

ESPT Congress Copenhagen, Denmark (Nov 25-27); cfDNA session on Nov 26

5th cfDNA Symposium, Houten, The Netherlands (June 9)

cfDNA session at IFCC Worldlab Dubai

WG - Standardization of Procalcitonin assays (WG-PCT)

Chair: Vincent Delatour (FR)

Term of reference 1

Develop and validate a reference measurement procedure for PCT absolute quantification by Stable Isotope Dilution Mass Spectrometry

List 2023 accomplishments for this Term of Reference

The submission for inclusion of the mass spectrometry (MS)-based reference method for the quantification of PCT in human serum (Anal Chem. 2022;94(10):4146-4154) to JCTLM database performed in 2022 has not been accepted.

The reviewers asked for a better documentation of the correlation between the candidate reference method and routine methods. In response, a study was carried out in collaboration with various in vitro diagnostics manufacturers (Elecsys® BRAHMS Procalcitonin from Roche, ALINITY i B·R·A·H·M·S PCT from Abbott, VIDAS® B.R.A.H.M.S PCT from bioMérieux, B·R·A·H·M·S KRYPTOR from Thermo), who analysed 12 candidate CRMs produced by LNE. The results show a good correlation but a substantial difference between the values obtained by (MS)-based method and by immunoassays. This suggests that recalibrating immunoassays against mass spectrometry would imply revising currently used cut-offs. As this would have important implications and costs, it is expected that harmonization against the Kryptor method is probably the way forward in case results comparability needs to be improved (ToR 2).

Before pursuing activities of this ToR, particularly to consolidate results by analysis of a larger number of samples by MS-based method and immunoassays, results of the ToR2 and ToR3 on the need to improve comparability and the need for standardisation of PCT assays need to be evaluated.

List planned activities in 2024 for this Term of Reference

Evaluate results from the commutability study and, when available, from the EQA scheme planned within ToR2 and the evaluation of the need for standardization of PCT assays within ToR3 to decide further activities within this ToR.

Respond to JCTLM Reviewers



Term of reference 2

Document and understand the variability of results provided by the different commercially available PCT assays

List 2023 accomplishments for this Term of Reference

A preliminary study was organized to compare results from the most popular immunoassays (Elecsys® BRAHMS Procalcitonin from Roche, ALINITY i B·R·A·H·M·S PCT from Abbott, VIDAS® B.R.A.H.M.S PCT from bioMérieux, B·R·A·H·M·S KRYPTOR from Thermo). Significant variability between immunoassays was observed, which is surprising given that the immunoassays involved in this study are in theory all calibrated with the B·R·A·H·M·S KRYPTOR method. These results indicate a need to harmonize PCT assays, but need to be consolidated by a study including a larger number of samples and additional methods (e.g. other than BRAHMS-like methods).

Thus, current activities of the group are almost exclusively focused on the preparation of first a PCT commutability study and then an EQA scheme relying on materials of proven commutability.

In 2023, the following materials has been prepared or collected for further inclusion in the commutability study:

- 7 candidate CRMs consisting in pools of human serum prepared from the single donations gathered by Hospitals of Heraklion (Prof Tsatsanis), Montpellier (Prof Cristol), Warsaw (Dr Demkow) and Surrey (Dr Creagh-Brown and Dr Falinska)
- 9 materials consisting of human serum spiked with recombinant PCT prepared by LNE
- 48 EQA materials supplied by SKML, RfB, Labquality, Weqas, RCPAQAP and in.vent

The list and location of labs where measurements will be conducted for the commutability study is now finalized. Measurements will generally be conducted in manufacturers' facilities. Contracts are being established with IVD providers which IVD-MDs will be included in the commutability study: this is what slows the launch of the study, which is now expected to start in February/March 2024.

As measurements of the commutability study will be conducted in one single lab for each IVD-MD, data will be enough to evaluate commutability of study materials and to get a first estimate of the state of the art in harmonization resulting from the results on commutable materials but possibly not to reliably document the current state of the art in harmonization of PCT assays. Thus, the WG is considering to organize an EQA scheme relying on materials of proven commutability to evaluate in a more robust manner the agreement between PCT assays and the need to improve the level of harmonization.

List planned activities in 2024 for this Term of Reference

Finalise the logistic for the commutability study.

Shipment of samples to all IVD providers, which IVD-MDs will be included in the commutability study

Perform measurement and data processing for the commutability study

Organise the EQA scheme relying on materials of proven commutability

Term of reference 3

Evaluate the need for standardization of PCT assays

List 2023 accomplishments for this Term of Reference

Previous accomplishments showed that

- comparability results provided by Brahms assays is largely perfectible (Clin Chem Lab Med. 2021;59(10):1610-1622).
- the need for standardization of PCT assays should be evaluated through a commutability study and a correlation study.
- PCT assays standardization has been identified as high priority with high clinical impact by ICHCLR
- commutable EQA materials are needed to accurately estimate between-method agreement

Following these outcomes, the effort of the working group has been focused on the preparation of a commutability study toward identification of commutable materials to be used as commutable EQA materials in an EQA scheme that would better document the need for standardization of PCT assays. Further accomplishment of this ToR will thus continue after accomplishment of the commutability study and the EQA scheme within ToR2.

List planned activities in 2024 for this Term of Reference

Evaluate results from the commutability study and, when available, from the EQA scheme within ToR2 toward further evaluation of the need for standardization of PCT assays

Pursue stakeholder consultation

Maintain and extend manufacturers' involvement

Term of reference 4

Evaluate the feasibility for standardization of PCT assays

List 2023 accomplishments for this Term of Reference

Feasibility for standardization of PCT assays will be evaluated after activities planned within ToR1, 2 and 3 have been completed

List planned activities in 2024 for this Term of Reference

Evaluate if the candidate reference method by mass spectrometry is sufficiently robust at PCT concentration of interest and enables to properly establish results traceability to the SI Units with sufficiently low measurements uncertainty

Evaluate the correlation between the different commercially available PCT assays and the candidate reference method by mass spectrometry

Seek for manufacturers' involvement and willingness to implement a new traceability chain

Term of reference 5

Perform standardization of PCT assays, if needed and feasible.

List 2023 accomplishments for this Term of Reference

Before performing the standardization of PCT assays, outcomes from ToR3 and ToR4 should demonstrate the need and feasibility for standardization of PCT assays.





List planned activities in 2024 for this Term of Reference

Accomplishment of this ToR will thus occur after accomplishment of the ToR3 and ToR4.

2023 Meetings / conference calls held

A face-to-face meeting was organized on May 22nd, 2023 during the EuroMedLab in Rome.

Meeting schedule in 2024

Bilateral virtual meetings will be arranged with participants of the commutability study to prepare it if needed

A face-to-face meeting will be organized on 27th May 2024 during WorldLab Dubai.

Publications/conference presentations/webinars

Publications

Activities conducted by IFCC WG-PCT are described in a paper published in the IFCC SD Special issue of CCA (Clin Chim Acta. 2021 Apr;515:111-121)

Results of the PCT EQA schemes and an analysis of all published correlation studies is published in CCLM (Clin Chem Lab Med. 2021;59(10):1610-1622).

The development and validation of a candidate reference measurement procedure for PCT absolute quantification by Stable Isotope Dilution Mass Spectrometry is completed and lead to 4 scientific publications.

The first paper on developments was published in analytical and bioanalytical chemistry in May 2021 (Anal Bioanal Chem. 2021 Aug;413(19):4707-4725). All WG members are identified as collaborators.

This publication was subject to a letter to the editor by Fresenius University (Anal Bioanal Chem. 2021;413(19):4917-4919) and a reply (Anal Bioanal Chem. 2021 Aug;413(19):4921-4922).

The fourth publication describe the validation of the candidate RMP based on protein-based calibration (Anal Chem. 2022;94(10):4146-4154).

CONFERENCE PRESENTATIONS

A. Bœuf, H. Vaneckhoutte, H-H. Huynh, C. Giangrande, L. Velly, P. Hausfater, B. Creagh-Brown, A. M. Falinska, U. Demkow, V. Anagnostopoulou, C. Tsatsanis, J-P. Cristol, L. Pieroni, J. F Huggett, V. Delatour, Standardisation of PCT assays: Update on status, needs and feasibility. EuroMedLab, Rome. 21-25 Mai 2023.

WG - Continuous Glucose Monitoring (WG-CGM)

Chair: Guido Freckmann (DE), Co-Chair: Robbert Slingerland (NL)

Term of reference 1

Work package 1 (WP-1): Establish a Traceability Chain to a defined Measurand Completed and published in 2021, see Freckmann et al., 20211

List 2023 accomplishments for this Term of Reference

Completed and published in 2021, see Freckmann et al., 2021.

Term of reference 2

Work package 2 (WP-2): CGM Analytical Performance: Procedures & Metrics

1. Establish procedures suitable for assessment of analytical performance of CGM systems,
2. Establish metrics and corresponding minimum acceptance criteria for the analytical performance of CGM systems.

List 2023 accomplishments for this Term of Reference

Work on WP-2 supporting projects (in cooperation with the Institute für Diabetes-Technologie Ulm and the Diabetes Center Berne):

Project 1: Acceptance Criteria and Measurement Procedures for Comparison Measurements Completed in 2022, see Pleus et al., 2022

Project 2: Distribution of Glucose Concentration and Glucose Rate of Change (ROC)

Taking all previous work into account, standardized testing procedures for CGM performance evaluations were developed including a new graphical presentation, named Dynamic glucose region (DGR)-plot. This plot depicts the combination of blood glucose concentrations and their corresponding RoCs in different regions. The borders of the DGR-plot were validated and justified by using real world CGM data from five published studies. This display allows to make minimum mandatory requirements for comparator data obtained in clinical CGM performance evaluations. A manuscript was prepared and circulated in the working group and among other experts in the field of CGM performance evaluations and feedback of all reviewers was included. The article was accepted for publication at the Journal Diabetes Technology and Therapeutics in January 2024 (Eichenlaub M, Pleus S, Rothenbühler M, Bailey TS, Bally L, Brazg RL, Bruttomesso D, Diem P, Eriksson Boija E, Fokkert M, Haug C, Hinzmann R, Jendle J, Klonoff DC, Mader JK, Makris K, Moser O, Nichols J, Norgaard K, Pemberton J, Selvin E, Spanou L, Thomas A, Tran N, Witthauer L, Slingerland RJ, Freckmann G. Comparator Data Characteristics and Testing Procedures for the Clinical Performance Evaluation of Continuous Glucose Monitoring Systems. *Diabetes Technol Ther.* 2024 Jan 9. Doi: 10.1089/dia.2023.0465).

Project 3: Graphical Display of Accuracy

Completed in 2022, see Stephan et al., 2023 and Eichenlaub et al., 2023

In addition to the WP-2 supporting projects, an extensive literature search on methods of CGM performance studies was performed. The results demonstrate and quantify the variety of design aspects and emphasize the need for standardization. A review article was prepared, extensively discussed with the working group and published.

Finalization and publication of project (Freckmann G, Eichenlaub M, Waldenmaier D, Pleus S, Wehrstedt S, Haug C, Witthauer L, Jendle J, Hinzmann R, Thomas A, Eriksson Boija E, Makris K, Diem P, Tran N, Klonoff D, Nichols J.H., Slingerland R. Clinical Performance Evaluation of Continuous Glucose Monitoring Systems: A Scoping Review and Recommendations for Reporting. *J Diabetes Sci Technol.* 2023 Nov;17(6):1506-1526).

Based on this literature review, the working group was invited to host a pre-session at the Diabetes Technology Meeting 2023.

Work on the WP-2 consensus document was continued and it was decided to split the working document in two parts, A and B. Part A deals with the procedures to collect data for the determination of analytical CGM performance while part B will contain all information necessary for data analysis of a clinical CGM performance study.

The first draft of the WP-2A consensus document is now finished and is currently under review by other members of the group.





Work on a publication summarizing the most important aspects of the WP-2A consensus document has been started.

List planned activities in 2024 for this Term of Reference

Further discussions and input to this work package via conference calls and via e-mail.

The publication of WP-2A will be finished and work on the consensus document of WP-2B will be continued to finalize this Term of Reference.

Term of reference 3

Work package 3 (WP 3): Work with ISO on a New CGM Guideline

Establishment of standardized procedures and acceptance criteria for CGM systems, covering mechanical and electromagnetic safety, analytical performance, and ease of use (analogous to ISO 15197 for blood glucose monitoring systems).

Cooperation with ISO should be aimed for, if the International Organization for Standardization (ISO) is interested:

The working group is intended to cooperate with ISO to define acceptable procedures and acceptance criteria used to assess analytical performance criteria of CGM systems, with similar scope as that of ISO 15197, which defines procedures and acceptance criteria for systems for self-monitoring of blood glucose. In the future, CGM will also play a role in hospitals. Criteria for the use in in-clinic settings need to be established as well.

List 2023 accomplishments for this Term of Reference

Contact to the German Standardization Organisation DIN has been started and several virtual meetings and ongoing email discussions have occurred. The DIN is currently in the process of bringing our standardization proposal to the ISO stage.

In addition, the standardization organisation of the Netherlands was also contacted.

List planned activities in 2024 for this Term of Reference

Further cooperation with the German DIN Organization and the International Organization for Standardization (ISO).

ADDITIONAL INFORMATION

The working group welcomed four new full members in 2023: Elizabeth Selvin (USA), Lilian Witthauer (Switzerland), Marion Fokkert (Netherlands) and Stefan Pleus (Germany).

The working group was contacted by J. Shaw and N. Korpi-Steiner who are working on a consensus document addressing the use of CGM in hospitalized patients and asked whether our group could contribute a chapter regarding the evaluation of CGM for hospital use. Their work is a collaborative effort from the American Diabetes Association (ADA), Diabetes Canada, American Association for Diagnostics & Laboratory Medicine (ADLM) Point of Care Testing (POCT) Division and the POCT Special Interest Group of the Canadian Society for Clinical Chemists (CSCC).

A corresponding chapter was prepared, circulated among the working group members and send to J. Shaw and N. Korpi-Steiner to be included in the consensus document in November 2023.

Talks / lectures about the work of the IFCC-WG-CGM were given by Guido Freckmann and others at various (online) events:

- Diatec congress, Berlin, Jan 2023
- International Conference on Advances Technologies & Treatments for Diabetes, Berlin, Feb 2023
- Annual Meeting of the German Diabetes Society (DDG), Berlin, May 2023
- ADLM (AACC) Meeting, Anaheim, Jul 2023

Diabetes Technology Meeting, November 2023 (special symposium for the WG and 1 talk in the main program)

2023 Meetings / conference calls held

Conference call on 16-Feb-2023

Conference call on 23-May-2023

Conference call on 26-Sep-2023

Multiple e-mail conversations during the whole year

Meeting schedule in 2024

Periodic e-mail conferences and telephone calls are planned for 2024.

The first (virtual) meeting will be in February/March 2024.

A hybrid meeting is planned for the WorldLab Meeting in Dubai on May 28th 2024.

Publication

s/conference presentations/webinars

Publications:

Freckmann G, Nichols JH, Hinzmann R, KLonoff DC, Ju Y, Diem P, Makris K, Slingerland RJ: Standardization process of continuous glucose monitoring: traceability and performance. *Clinica Chimica Acta* 515 (2021) 5–12

Pleus S, Eichenlaub M, Gerber T, Eriksson Boija E, Makris K, Haug C, Freckmann G: Improving the Bias of Comparator Methods in Analytical Performance Assessments Through Recalibration. *J Diabetes Sci Technol* 2022 Oct 22:19322968221133107. doi: 10.1177/19322968221133107. Online ahead of print

Stephan P, Eichenlaub M, Waldenmaier D, Pleus S, Rothenbühler M, Haug C, Freckmann G: A statistical approach for assessing the compliance of integrated continuous glucose monitoring systems with FDA accuracy requirements. *Diabetes Technol. Ther.* 2023 Mar;25(3):212-216

Eichenlaub M, Stephan P, Waldenmaier D, Pleus S, Rothenbühler M, Haug C, Hinzmann R, Thomas A, Jendle J, Diem P, Freckmann G: Continuous Glucose Deviation Interval and Variability Analysis (CG-DIVA): A Novel Approach for the Statistical Accuracy Assessment of Continuous Glucose Monitoring Systems. *J Diabetes Sci Technol.* 2023 Nov;17(6):1506-1526

Freckmann G, Eichenlaub M, Waldenmaier D, Pleus S, Wehrstedt S, Haug C, Witthauer L, Jendle J, Hinzmann R, Thomas A, Eriksson Boija E, Makris K, Diem P, Tran N, Klonoff D, Nichols J.H., Slingerland R. Clinical Performance Evaluation of Continuous Glucose Monitoring Systems: A Scoping Review and Recommendations for Reporting. *JDST* 2023: doi:10.1177/19322968231190941

Eichenlaub M, Pleus S, Rothenbühler M, Bailey TS, Bally L, Brazg RL, Bruttomesso D, Diem P, Eriksson Boija E, Fokkert M, Haug C, Hinzmann R, Jendle J, Klonoff DC, Mader JK, Makris K,





Moser O, Nichols J, Norgaard K, Pemberton J, Selvin E, Spanou L, Thomas A, Tran N, Witthauer L, Slingerland RJ, Freckmann G. Comparator Data Characteristics and Testing Procedures for the Clinical Performance Evaluation of Continuous Glucose Monitoring Systems. *Diabetes Technol Ther.* 2024 Jan 9. doi: 10.1089/dia.2023.0465. Online ahead of print.

Conference Presentations/Webinars:

Freckmann G, Slingerland RJ: Continuous Glucose Monitoring – What should be optimized and considered in the future? Scientific short, published online at American Association for Clinical Chemistry (AACC), (2021)

Freckmann G, “Standardization in Glucose Monitoring”, presentation at the Euromedlab Meeting, 13-Apr-2022

Freckmann G, “Kontinuierliche Glukosemessung CGM – Traceability and Standards”, presentation at DGKL Meeting, 13-Okt-2022

Freckmann G, “Traceability of CGM”, presentation at Diabetes Technology Meeting (DTM), 03-Nov- 2022

Freckmann G, “The Continuous Glucose Deviation Interval and Variability Analysis (CG-DIVA)”, presentation at the diatec Congress, 27-Jan-2023

Freckmann G, “Why do CGM performance assessments need more standardization?”, presentation at the ATTD Meeting, 24-Feb-2023

Freckmann G, “Güte der Glukosemessung bei CGM-Systemen - Sind Standards notwendig? “, presentation at the DDG Meeting, 19-May-2023

Freckmann G, “Standardization process of Continuous Glucose Monitoring: Traceability and Performance”, presentation at the AACC Meeting, 28-Jul-2023

Pleus S, “A scoping review of CGM performance evaluations from the last 20 years”, presentation at the pre-meeting of the DTM, 01-Nov-2023

Freckmann G, “Standardized testing procedures for the clinical performance evaluation of CGM systems: A proposal by the IFCC Working group on CGM”, presentation at the pre-meeting of the DTM, 01-Nov-2023

Hinzmann R, “Comparison Measurement Approaches for CGM Accuracy Performance Studies”, presentation at the pre-meeting of the DTM, 01-Nov-2023

Eichenlaub M, “Continuous Glucose Deviation Interval and Variability Analysis (CG-DIVA)”, presentation at the DTM, 02-Nov-2023

WG-Development of a Reference Measurement System For Sustainable PT/INR Standardization (WG- PT/INR), Chair: Christa Cobbaert (NL)

Term of reference 1

To develop a harmonized reference measurement procedure based on the WHO manual tilt tube technique as well as the complete reference measurement system for global standardization of the PT/INR test. An entire reference measurement system is essential to anchor the commercial International Standards for thromboplastin to assure longitudinal accuracy of PT/INR-test results in time and space across manufacturers.

List 2023 accomplishments for this Term of Reference

The working group is working successfully on both parallel lines as described in the planned activities.

1. Development of a harmonized MTT as Candidate Measurement Procedure in a network of WHO calibration labs (see Term of reference 4)
2. Selecting and defining a suitable candidate Reference Material as part of the metrological traceability chain to be set up for the development of a sustainable Reference Measurement System that allows global PT/INR standardization

A choice has been made for a single recombinant human reference thromboplastin as primary reagent calibrator. In March 2023 a study of the new IRP was conducted to evaluate the performance and suitability of the primary standard. Four calibration labs participated in the pilot study. In September 2023 stability of the new IRP was assessed in an accelerated degradation experiment performed by NIBSC and one calibration lab.

According to ISO 17511:2020 two calibration hierarchies have been defined:

1. Calibration hierarchy of plasma INR measurement by end-user medical laboratories
2. Calibration hierarchy of POC INR whole blood procedure

The new primary reference thromboplastin (new IRP) should have been manufactured in November 2023. Yet, at NIBSC there are significant delays in the production of reference materials due to equipment failure which creates a backlog of fills. The exact date is at this moment still uncertain, in worst case this will be in May 2024. This means that the IFCC WG PT/INR cannot apply for JCTLM listing in 2024.

The new calibration hierarchy is IFCC endorsed and has been published in JTH by van de Besselaar and colleagues. The publication is entitled: *Defining a metrologically traceable and sustainable calibration hierarchy of international normalized ratio for monitoring of vitamin K antagonist treatment in accordance with International Organization for Standardization (ISO)17511:2020 standard: communication from the International Federation of Clinical Chemistry and Laboratory Medicine–SSC/ISTH working group on prothrombin time/international normalized ratio standardization*. Doi.org/10.1016/j.jtha.2023.12.013

The deadline for submission of the ECBS report to NIBSC for the Spring 2025 meeting is late December 2024.

List planned activities in 2023/2024 for this Term of Reference

Operators of the 4 calibration labs have participated in eleven ring trials in 2022/2023. Based on the results of all the ring trials (2022/2023) the maximum allowable Measurement Uncertainty (MU) is calculated to determine the state of allowance fitting into the traceability chain. Allowable uncertainties are projected in the traceability chain. At this moment a manuscript is written regarding the network performance; a publication is underway. **Harmonizing the Manual Tilt Tube technique is an ongoing process and periodic ring trials will continue in 2024.**

The **Multicentre (MC) study among the four calibration labs to calibrate the new IRP**, can only be organized if the new IRP is available. The MC study was originally planned in January 2024, due to the delay in producing the new IRP the MC study will be in Q3/Q4 of 2024.

The **preparations for JCTLM listing of the PT/INR RMS** have started by building up a technical dossier to demonstrate compliance of the RMS to relevant ISO guidelines. JCTLM review for launch of the call for nominations was February 2024. Deadline for submission of nominations is May 2024. Due to the delay of the new IRP, JCTLM listing is postponed one year (call for nominations is only once a year).



A **road map for future adoption and implementation** of PT/INR standardization of tests should be developed with SSC/ISTH, IVD manufacturers, EQA organizers and other stakeholders.

Communication, dissemination and education of the first RMS for PT/INR will be given attention during the ISTH 2024 congress, as well as in IFCC eNews and in social media.

Term of reference 2

To review the agreed WHO procedure for calculating ISI of new international standards as the procedure should not lead to deterioration of the traceability of PT/INR test results.

List 2023 accomplishments for this Term of Reference

Reconsideration of the agreed WHO procedure for ISI assignment based on a new single rec human thromboplastin instead of averaging of ISI's from rec human thromboplastin and bovine thromboplastin. This fundamental change leads to updating the WHO-procedure for calibration labs accordingly.

List planned activities in 2023/2024 for this Term of Reference

In October 2023 a request was done at the ECBS meeting for replacement current IRP and change in calibration approach. The proposal is accepted with minimum discussion. The full report of the meeting has not yet been published. The WHO guidelines will be rewritten in 2024.

Term of reference 3

To evaluate the necessity of the co-existence respectively continuation of different thromboplastin reference materials for ensuring global PT/INR standardization.

List 2023 accomplishments for this Term of Reference

It was decided to opt for a single rec human primary thromboplastin for PT/INR standardization of tests. Once available the new IRP will be calibrated in an international collaborative study for the calibration of proposed International Standards for thromboplastin.

Due to technical problems at NIBSC there is a delay in processing the new IRP. Probably the new IRP is filled at the latest in May 2024.

List planned activities in 2024 for this Term of Reference

The Multicentre study, originally planned in January 2024 by the four calibration labs, will be re-scheduled to Q3/Q4 of 2024.

Organizing a long term stability study of the new IRP with NIBSC (which will be organized if the new IRP is available) will occur.

Term of reference 4

Four calibration labs are running the harmonized MTT method for certifying the calibration of commercial thromboplastins from IVD-manufacturers

List 2023/2024 accomplishments for this Term of Reference

- | | |
|---|----------------------|
| • Testing and evaluation Ring trial 2023-01 | Date: May 2023 |
| • Testing and evaluation Ring trial 2023-02 | Date: April 2023 |
| • Testing and evaluation Ring trial 2023-03 | Date: June 2023 |
| • Testing and evaluation Ring trial 2023-04 | Date: September 2023 |

- Testing and evaluation Ring trial 2023-05
- Testing and evaluation Ring trial 2023-06

Date: October 2023

Date: January 2024

Periodic ring trials are organized by LUMC. Harmonization of results assigned by the calibration labs is the goal. Reduction of the within and between variability of the operators to a stable low and feasible imprecision level that makes the MTT fit-for purpose. There is a (successful) and joined effort to achieve the criteria for reducing the within and between variability. The working group concludes that the operators achieved a plateau, i.e. the maximum achievable performance for the harmonized MTT.

Based on the interlaboratory assessment of the PT/INR ring trial data the harmonized MTT is found acceptable at predefined clinical decision limits. A paper is in progress.

The calibration labs participated in testing the (candidate) primary reference thromboplastin.

List planned activities in 2024 for this Term of Reference

JCTLM listing. RELA has IFCC endorsement for organizing the IFCC External Quality assessment schemes for Reference Laboratories in Laboratory Medicine.

Predefining acceptable calibration and network performance is something to accomplish in the future.

A manuscript is in progress on the RMP and network performance based on the interlaboratory assessment of the PT/INR ring trial data.

After availability of the new IRP:

Organizing the MC study, updating the WHO guidelines for PT/INR standardization, preparing JCTLM listing as far as possible, organizing periodic ring trials, preparing a road map for the implementation of the new IRP with EQA organizations and other stakeholders.

ADDITIONAL INFORMATION

The members and consultants and corporate members are well committed, as well as the referent material providers and the IBD-industry. Activity is now needed from all WG-stakeholders.

It is a pity this WG cannot progress and complete the RMS in 2024 because of filling issues at NIBSC.

2023 Meetings / conference calls held

IFCC-ISTH January 30th, Zoom meeting 2.00 – 3.30 pm CET

IFCC-ISTH March 3th, Zoom meeting 2.00-2.50 pm CET

IFCC-ISTH March 20th, Zoom meeting 2.00-3.30 pm CET

IFCC-ISTH May 15th, Zoom meeting 2.00-3.00 pm CET

IFCC-ISTH July 11th, Zoom meeting 2.00 – 3.30 pm CET

IFCC-ISTH October 26th, Zoom meeting 2.00-3.30 pm CET

IFCC-ISTH December 14th, Zoom meeting 2.00-3.30 pm CET

MEETING SCHEDULE IN 2024

IFCC-ISTH January 11th, Zoom meeting 2.00 – 3.30 pm CET

IFCC-ISTH March 14th, Zoom meeting 2.00-3.30 pm CET





IFCC-ISTH April 25th, Zoom meeting 2.00-3.30 pm CET

IFCC-ISTH May 16th, Zoom meeting 2.00-3.00 pm CET

IFCC-ISTH September 12th, Zoom meeting 2.00 – 3.30 pm CET

IFCC-ISTH October 24th, Zoom meeting 2.00-3.30 pm CET

IFCC-ISTH December 12th, Zoom meeting 2.00-3.30 pm CET

Publications/conference presentations/webinars

Defining a metrologically traceable and sustainable calibration hierarchy of international normalized ratio for monitoring of vitamin K antagonist treatment in accordance with International Organization for Standardization (ISO)17511:2020 standard: communication from the International Federation of Clinical Chemistry and Laboratory Medicine–SSC/ISTH working group on prothrombin time/international normalized ratio standardization.

Antonius M. H. P. van den Besselaar, Anne Stavelin, Steve Kitchen, Michelle Bryant, Armando Tripodi, Erica Scalabrino, Marigrazia Clerici, Petra Herbel, Anja Jünschke, Sascha Meyer dos Santos, Piet Meijer, Rene W. L. M. Niessen, Joost C. M. Meijers, Craig Thelwell, Adam Cuker, Chun Kung, Zhenghua Cao, Norbert Zander, Yosuke Iwasaki, François Depasse, Claudia van Rijn, Shanti Baktawar, Charmane Abdoel, Christa M. Cobbaert. Doi.org/10.1016/j.jtha.2023.12.013

2024 in progress

Paper on intercalibration lab variation deduced from ring trial data of the Manual Tilt Tube Technique for Prothrombin Time Testing: A Multicenter Study are underway.

WG– Harmonisation of Autoantibody Testing (WG-HAT),

Chair: Dr Joanna Sheldon (UK)

Term of reference 1

The production of certified reference materials for the quantification of autoantibody concentrations – IgG antibodies to beta-2 glycoprotein 1.

List 2023 accomplishments for this Term of Reference

The reference material for anti beta2 glycoprotein 1 antibodies has been value assigned in IU through the WHO (via NIBSC). ERM-DA477/IFCC. Despite this material being available, there has been limited adoption by the diagnostic companies. Never the less, Liesbet Deprez has been working with Prof PierLuigi Meroni (an expert in this field) looking at how use of the reference material may improve harmonisation of the results of patient samples in the quantification of IgG anti beta2 glycoprotein 1 antibodies. Preliminary data looks promising but we will continue working on this aspect in the hope that it will encourage companies to adopt this material.

List planned activities in 2024 for this Term of Reference

To continue to work with Liesbet Deprez at the JRC and Prof Meroni at University of Milan to demonstrate harmonisation of the patient results if ERM-DA477/IFCC I used.

Term of reference 2

The production of certified reference materials for the quantification of autoantibody concentrations in Coeliac disease.

List 2023 accomplishments for this Term of Reference

The reference material for coeliac antibodies has been prepared and is commutable and designated EURM487/IFCC for anti-tissue transglutaminase IgA and IgG antibodies. We are therefore working with NIBSC for value assign in IU through the WHO.

List planned activities in 2024 for this Term of Reference

All in house measurements at the JRC will be completed by the end of Feb 2024. The draft report and data analysis will be completed by the JRC by the end of March 2024. The review period of the MHRA is April-May 2024 then the JRC will write the report with the draft going to external review at the end of June 2024 and finally the presentation at the WHO ECBS in October 2024.

Liesbet Deprez at the JRC is leading this process.

Term of reference 3

The production of certified reference materials for the quantification of autoantibody concentrations – IgG anti Glomerular Basement Membrane

List 2023 accomplishments for this Term of Reference

The raw material has been sourced and is with the JRC. The documentation relating to consent that this may be used for the preparation of reference material for the overall benefit to patients has been received. This material will be designated EURM484/IFCC anti GBM IgG.

List planned activities in 2024 for this Term of Reference

The plan is for the material to be processed in February -March 2024 with homogeneity and short term stability testing planned for April 2024. The draft report proposing the anti GBM project will be submitted to the WHO ECBS meeting in October 2024. Long-term stability testing should be complete by March 2025 will full characterisation and commutability testing completed in April 2025. Providing these studies are all acceptable, the final approval should be ready at the October 2025 meeting of the WHO ECBS.

2023 Meetings / conference calls held

05.01.2023 – meeting with JRC and NIBSC (virtual)

22.05.2023 – meeting with JRC at IFCC Rome

11.09.2023 - meeting with JRC (virtual)

12.02.2024 - meeting with JRC (virtual)

19.02.2024 – meeting with JRC, Prof Meroni and team and Prof Rohan Willis (virtual)

PUBLICATIONS/CONFERENCE PRESENTATIONS/WEBINARS

Liesbet Deprez presented an abstract for World Euromedlab in Rome

Joanna Sheldon co-chaired and presented at the Autoimmune Diseases symposium at World Euromedlab in Rome



WG on NEONATAL BILIRUBIN (WG-NB) in cooperation with IFCC Emerging Technologies Division

Co-Chairs: R Graves (AU) and L Mackay (AU)

Report sent to Emerging Technologies Division and reported by this division.

WG on NATRIURETIC PEPTIDES (WG-NP)

Chair: A Saenger (US)

NO report received for Annual Report; section extracted from most recent report presented to SD-EC.

There has been a need to change the Chair twice and there has not been progress yet with the three different Chairs. EDT is working on NP biosensors.

WG on Standardization of HbF (WG-HbF), Chair: Andrea Mosca (IT)

Term of reference 1

Promoting the use of an LC-MS/MS method as the accuracy base for standardization of HbF

List 2023 accomplishments for this Term of Reference

- a. Definition of the measurand
The measurand has been defined as total HbF (i.e. the sum of the two fetal haemoglobin tetramers, the one with G chains, the other one with chains).
- b. Development of a Reference Measurement Procedure (RMP)
The WG agrees to use recombinant intact and chains as primary calibrators (not labeled and labelled with ¹⁵N) for the RMP, in order to have a better control on tryptic digestion. The same biotech Company (Trenzyme BmH) which provided the recombinant hemoglobins for the HbA2 standardization will be contacted in order to have an offer for the recombinant hemoglobins.

List planned activities in 2024 for this Term of Reference

To purchase the recombinant Hbs, to test their purity and to use them for the development of the RMP.

Term of reference 2

Maintaining sustainability of an international network of reference laboratories

List 2023 accomplishments for this Term of Reference

No actions performed so far.

List planned activities in 2024 for this Term of Reference

Activities will start after the achievement of the development of the RMP.

2023 Meetings / conference calls held

Rome, 6 June 2023 (in person)

By Zoom, 30 November 2023

Meeting schedule in 2024

By Zoom, 30 April 2024

In person at the IFCC Secretariat in Milano, 25 September 2024

Eventual two additional virtual meetings, depending on the developments of the actions related to the terms of reference.

2023 Publications in refereed journals by Committees and Working Groups:

OTHER PUBLICATIONS AND PRESENTATIONS ARE GIVEN IN THE INDIVIDUAL REPORTS.

COMMITTEES

C-Nomenclature, Properties and Units (C-NPU)

Lee Hansen Y, Toska K, Lund A, Flatman R, Ceder R. Properties and units in the clinical laboratory sciences. Part XXVII: online dynamic NPU manual (IUPAC Technical Report). Pure and Applied Chemistry. 2023;95(2): 125-131. <https://doi.org/10.1515/pac-2021-1109>

C-Molecular Diagnostics (C-MD)

Clin Chim Acta. 2023 Jul 1;547:117398. doi: 10.1016/j.cca.2023.117398. Epub 2023 May 20. Results from an IFCC global survey on laboratory practices for the analysis of circulating tumor DNA Mark W Linder 1, Jim F Huggett 2, Katarina Baluchova 3, Ettore D Capoluongo 4, Deborah A Payne 5, Aldo Vacaflor Salinas 6, Verena Haselmann 7, Tester Ashavaid 8, Shiyang Pan 9, Parviz Ahmad-Nejad 10; IFCC Committee for Molecular Diagnostics C-MD PMID: 37217114 DOI: 10.1016/j.cca.2023.117398

C-Standardisation of Thyroid Function Tests (C-STFT)

Cowper B, Lyle AN, Vesper HW, Van Uytvanghe K, Burns C. Standardisation and harmonisation of thyroid-stimulating hormone measurements: historical, current, and future perspectives. Clin Chem Lab Med. 2024 Jan 31. doi: 10.1515/cclm-2023-1332. Epub ahead of print. PMID: 38295422.

Ribera A, Zhang L, Ribeiro C, Vazquez N, Thonkulpitak J, Botelho JC, Danilenko U, van Uytvanghe K, Vesper HW. Practical considerations for accurate determination of free thyroxine by equilibrium dialysis. J Mass Spectrom Adv Clin Lab. 2023 Jun 23;29:9-15. doi: 10.1016/j.jmsacl.2023.06.001. PMID: 37449264; PMCID: PMC10336244.

Jansen HI, van der Steen R, Brandt A, Olthaar AJ, Vesper HW, Shimizu E, Heijboer AC, Van Uytvanghe K, van Herwaarden AE. Description and validation of an equilibrium dialysis ID-LC-MS/MS candidate reference measurement procedure for free thyroxine in human serum. Clin Chem Lab Med. 2023 Mar 31;61(9):1605-1611. doi: 10.1515/cclm-2022-1134. PMID: 36994743.

Ribera A, Zhang L, Dabbs-Brown A, Sugahara O, Poynter K, van Uytvanghe K, Shimizu E, van Herwaarden AE, Botelho JC, Danilenko U, Vesper HW. Development of an equilibrium dialysis



ID-UPLC-MS/MS candidate reference measurement procedure for free thyroxine in human serum. *Clin Biochem*. 2023 Jun;116:42-51. doi: 10.1016/j.clinbiochem.2023.03.010. Epub 2023 Mar 20. PMID: 36940844.

Publications from the ATA working group, with active participation of Dr. Van Uytvanghe to ensure information is mentioning or in line with the C-STFT activities. Loh TP, Ehrenkranz J, Halsall D, Hoff K, Spencer CA, Van Uytvanghe K, Köhrle J. Response to Fitzgerald et al. re: "Thyroid Stimulating Hormone and Thyroid Hormones (Triiodothyronine and Thyroxine): An American Thyroid Association-Commissioned Review of Current Clinical and Laboratory Status". *Thyroid*. 2024 Feb;34(2):276-278. doi: 10.1089/thy.2023.0604. Epub 2024 Jan 17. PMID: 38236706.

Van Uytvanghe K, Ehrenkranz J, Halsall D, Hoff K, Loh TP, Spencer CA, Köhrle J. Thyroid Stimulating Hormone and Thyroid Hormones (Triiodothyronine and Thyroxine): An American Thyroid Association-Commissioned Review of Current Clinical and Laboratory Status. *Thyroid*. 2023 Sep;33(9):1013-1028. doi: 10.1089/thy.2023.0169. Epub 2023 Sep 1. PMID: 37655789; PMCID: PMC10517335.

Loh TP, Ehrenkranz J, Halsall D, Spencer CA, Van Uytvanghe K, Köhrle J. Clinical Interpretation of Thyroid Tests: Considerations for Reference Intervals. *Thyroid*. 2023 Apr;33(4):404-406. doi: 10.1089/thy.2023.0096. PMID: 36927102.

WORKING GROUPS

WG – Commutability in Metrological Traceability (WG-CMT)

Miller WG, Budd J, Greenberg N, Weykamp C, Althaus H, Schimmel H, Panteghini M, Delatour V, Ceriotti F, Keller T, Hawkins D, Burns C, Rej R, Camara JE, MacKenzie F, van der Hagen E, Vesper H, for the IFCC Working Group on Commutability. IFCC Working Group Recommendations for Correction of Bias Caused by Noncommutability of a Certified Reference Material Used in the Calibration Hierarchy of an End-User Measurement Procedure. *Clin Chem* 2020;66:769-78.

Miller WG, Myers G, Cobbaert CM, Young IS, Theodorsson E, Wielgosz RI, Westwood S, Maniguet S, Gillery P. Overcoming challenges regarding reference materials and regulations that influence global standardization of medical laboratory testing results. *Clin Chem Lab Med* 2022;61:48-54.

Miller WG, Greenberg N, Panteghini M, Budd JR, Johansen JV for the IFCC Working Group on Metrological Traceability in Laboratory Medicine. Guidance on which calibrators in a metrologically traceable calibration hierarchy must be commutable with clinical samples. *Clin Chem* 2023;69:228-38.

Miller WG, Keller T, Budd J, Johansen JV, Panteghini M, Greenberg N, Delatour V, Ceriotti F, Deprez L, Rej R, Camara JE, MacKenzie F, Lyle AN, van der Hagen E, Burns C, Fauskanger P, Sandberg S, for the IFCC Working Group on Commutability in Metrological Traceability. Recommendations for setting a criterion for assessing commutability of secondary calibrator certified reference materials. *Clin Chem* 2023;69:966-75.

Sandberg S, Fauskanger P, Johansen JV, Keller T, Budd J, Greenberg N, Rej R, Panteghini M, Delatour V, Ceriotti F, Deprez L, Camara JE, MacKenzie F, Lyle AN, van der Hagen E, Burns C, Miller WG, for the IFCC Working Group on Commutability in Metrological Traceability. Recommendations for setting a criterion and assessing commutability of sample materials used in external quality assessment/proficiency testing schemes. *Clin Chem* 2023;69:1227-37.



WG - Apolipoproteins by Mass Spectrometry (WG-APO MS)

Development of an LC-MRM-MS-Based Candidate Reference Measurement Procedure for Standardization of Serum Apolipoprotein (a) Tests, L Renee Ruhaak, Fred P H T M Romijn, Ilijana Begcevic Brkovic, Zsusanna Kuklennyik, Julia Dittrich, Uta Ceglarek, Andrew N Hoofnagle, Harald Althaus, Eduardo Angles-Cano, Stefan Coassin, Vincent Delatour, Liesbet Deprez, Ioannis Dikaïos, Gerhard M Kostner, Florian Kronenberg, Alicia Lyle, Urban Prinzing, Hubert W Vesper, Christa M Cobbaert on behalf of the International Federation of Clinical Chemistry and Laboratory Medicine Working Group Apolipoproteins by Mass Spectrometry, *Clinical Chemistry*, Volume 69, Issue 3, March 2023, Pages 251–261, <https://doi.org/10.1093/clinchem/hvac204>

Commutability Assessment of Candidate Reference Materials for Lipoprotein(a) by Comparison of a MS-based Candidate Reference Measurement Procedure with Immunoassays, Ioannis Dikaïos, Harald Althaus, Eduardo Angles-Cano, Uta Ceglarek, Stefan Coassin, Christa M Cobbaert, Vincent Delatour, Benjamin Dieplinger, Matthias Grimmier, Andrew N Hoofnagle, Gerhard M Kostner, Florian Kronenberg, Zsusanna Kuklennyik, Alicia N Lyle, Urban Prinzing, L Renee Ruhaak, Hubert Scharnagl, Hubert W Vesper, Liesbet Deprez on behalf of the IFCC Working group on Apolipoproteins by Mass Spectrometry (WG-APO MS), *Clinical Chemistry*, Volume 69, Issue 3, March 2023, Pages 262–272, <https://doi.org/10.1093/clinchem/hvac203>

Developing an SI-traceable Lp(a) reference measurement system: a pilgrimage to selective and accurate apo(a) quantification, Nina M Diederiks, Yuri E M van der Burgt, L Renee Ruhaak, Christa M Cobbaert, *Crit Rev Clin Lab Sci* 2023 Nov;60(7):483-501. doi: 10.1080/10408363.2023.2199353.

Relating Lipoprotein(a) Concentrations to Cardiovascular Event Risk After Acute Coronary Syndrome: A Comparison of 3 Tests, Szarek M, Reijnders E, Jukema JW, Bhatt DL, Bittner VA, Diaz R, Fazio S, Garon G, Goodman SG, Harrington RA, Ruhaak LR, Schwertfeger M, Tsimikas S, White HD, Steg PG, Cobbaert C, Schwartz GG; ODYSSEY OUTCOMES Investigators. *Circulation*. 2024 Jan 16;149(3):192-203. doi: 10.1161/CIRCULATIONAHA.123.066398.

An LC-MS-based designated comparison method with similar performance to the Lp(a) reference measurement procedure to guide molar Lp(a) standardization. Diederiks NM, Ruhaak LR, Romijn FPHTM, Pieterse MM, Smit NPM, Cobbaert CM. *Clin Proteomics*. 2024 Jan 24;21(1):5. doi: 10.1186/s12014-023-09446-5.

Next-generation apo(a) standardization: why, when and how?, Ruhaak LR and Cobbaert CM, *Clin Lab Int* 2023

WG - Faecal Immunochemical Testing (WG-FIT)

Publication: Method comparison and commutability study among four faecal immunochemical tests (FIT) systems. Deprez L, Piggott C, van der Hagen E, Frasa M, Benton S, on behalf of the IFCC working group on faecal immunochemical testing. *CCLM* 2023; 62(1):50-59.

WG - Continuous Glucose Monitoring (WG-CGM)

Stephan P, Eichenlaub M, Waldenmaier D, Pleus S, Rothenbühler M, Haug C, Freckmann G: A statistical approach for assessing the compliance of integrated continuous glucose monitoring systems with FDA accuracy requirements. *Diabetes Technol. Ther.* 2023 Mar;25(3):212-216

Eichenlaub M, Stephan P, Waldenmaier D, Pleus S, Rothenbühler M, Haug C, Hinzmann R, Thomas A, Jendle J, Diem P, Freckmann G: Continuous Glucose Deviation Interval and Variability Analysis (CG-DIVA): A Novel Approach for the Statistical Accuracy Assessment of Continuous Glucose Monitoring Systems. *J Diabetes Sci Technol*. 2023 Nov;17(6):1506-1526

Freckmann G, Eichenlaub M, Waldenmaier D, Pleus S, Wehrstedt S, Haug C, Witthauer L, Jendle J, Hinzmann R, Thomas A, Eriksson Boija E, Makris K, Diem P, Tran N, Klonoff D, Nichols J.H., Slingerland R. Clinical Performance Evaluation of Continuous Glucose



Monitoring Systems: A Scoping Review and Recommendations for Reporting. JDST 2023: doi:10.1177/19322968231190941

Eichenlaub M, Pleus S, Rothenbühler M, Bailey TS, Bally L, Brazg RL, Bruttomesso D, Diem P, Eriksson Boija E, Fokkert M, Haug C, Hinzmann R, Jendle J, Klonoff DC, Mader JK, Makris K, Moser O, Nichols J, Norgaard K, Pemberton J, Selvin E, Spanou L, Thomas A, Tran N, Witthauer L, Slingerland RJ, Freckmann G. Comparator Data Characteristics and Testing Procedures for the Clinical Performance Evaluation of Continuous Glucose Monitoring Systems. Diabetes Technol Ther. 2024 Jan 9. doi: 10.1089/dia.2023.0465. Online ahead of print.



WG-Development of a Reference Measurement System For Sustainable Pt/Inr Standardization (WG- PT/INR)

Defining a metrologically traceable and sustainable calibration hierarchy of international normalized ratio for monitoring of vitamin K antagonist treatment in accordance with International Organization for Standardization (ISO)17511:2020 standard: communication from the International Federation of Clinical Chemistry and Laboratory Medicine–SSC/ISTH working group on prothrombin time/international normalized ratio standardization.

Antonius M. H. P. van den Besselaar, Anne Stavelin, Steve Kitchen, Michelle Bryant, Armando Tripodi, Erica Scalabrino, Marigrazia Clerici, Petra Herbel, Anja Jünschke, Sascha Meyer dos Santos, Piet Meijer, Rene W. L. M. Niessen, Joost C. M. Meijers, Craig Thelwell, Adam Cuker, Chun Kung, Zhenghua Cao, Norbert Zander, Yosuke Iwasaki, François Depasse, Claudia van Rijn, Shanti Baktawar, Charmane Abdoel, Christa M. Cobbaert. Doi.org/10.1016/j.jtha.2023.12.013

Garry John - SD Secretary

EDUCATION AND MANAGEMENT DIVISION (EMD)

Executive Committee Membership:

N. Rifai	Chair	US	1 st	2021 01 - 2023 12
V. Steenkamp	Vice Chair	ZA	1 st	2021 01 - 2023 12
T. Zima	Mamber	CZ	1 st	2021 01 - 2023 12
S. Yenice	Member and VLP Chair	TR	1 st	2021 01 - 2023 12
A. Ziegler	Corp. Rep. and Secretary	CH	2 nd	2021 01 - 2023 12

Summary of the Accomplishments of the EMD in 2023

Below, a summary of the accomplishments of EMD functional units and programs is provided:

1. All functional units met or exceeded the requirements for face-to-face or virtual meetings.
2. All chairs are exemplary in their performance and in carrying on their duties.
As I indicated during my last meeting with EB, I am concerned about the upcoming ending of Claude Lambert's term. He has not yet identified a replacement. I will work with him to make sure the appropriate person is identified. Otherwise, the success of this group in conducting flow cytometry workshops will be in jeopardy.
3. All functional units performed well, were productive, and operated within budget.
4. VLP surpassed in terms of numbers of supported congresses/speakers the all-time high numbers of 2019. It has demonstrated a total recovery from the Covid setback. See table at the end of EMD report.
5. PEP is highly successful after being revamped with two calls for application per year. No progress however, on getting a financial sponsor for it from our corporate family has been made. Any suggestion or help from the Corporate Representative on the EB would be greatly appreciated. Such a sponsorship is crucial for the growth and viability of this program.
6. Learning Lab has currently over 13,000 users from 154 countries. Translations to 10 different languages are actively underway. Launching the multilingual sites will take place at the end of Q1-2024. A certificate program for "successful course completion" has been created. Efforts will start to get CPD credits via EFLM.
7. In collaboration with Sergio Bernardini and his division, the EMD set up a group of experts to develop a guiding document on the use of machine learning in laboratory medicine. The guidelines were published in Clinical Chemistry in 2023 and presented in EuroMed Lab meeting in Rome in a symposium. Two IFCC webinars were also presented by the experts.
8. The Committee on Value Proposition for Laboratory Medicine (C-VPLM) has completed its second term and closed in December 2023

Below, the detailed reports of the EMD functional units are provided.

Committee on Clinical Molecular Biology Curriculum (C-CMBC),

Chair: Verena Haselman (DE)

Term of reference 1

COURSE IMPROVEMENT/DEVELOPMENT

List planned activities in 2023 for this Term of Reference

REVISION BEGINNER COURSE: the Beginners course held in Nigde in 2022 was evaluated during the functional unit meeting. Based on this evaluation, the in-silico part was revised and now comprising nearly one day of teaching. In addition, various online tools are introduced as part of the course and participants have the opportunity to familiarize themselves with these tools under the guidance of the tutors.

Due to the shortness of tutors (Prof. Russomando was not able to join the course due to personal reasons, and Prof. Ferreira-Gonzalez could not participate due to health issues) and difficulties to obtain visas in time, the Beginners course was changed into an online format. Thus, the entire course was intensively revised, particularly the wet-lab part.

REVISION ADVANCED COURSE: Based on the evaluation of the second advanced course and in close alignment with the hosting society, the lectures outline and in-silico training of the advanced course were revised. As planned, the focus of the advanced course is now on modern techniques, the interpretation of genetic variants and the validation of lab-developed tests. In detail, the course comprises three days. Day 1 has a focus on advanced genetic techniques, nomenclature and classification of variants and an introduction into ISO 15189 and IVDR with a focus on molecular genetics. Day 2 focuses on verification of CE-certified tests, validation strategies for qualitative genetic tests with different exercises and in-silico tools. Within day 3 methods to detect low-frequency variants, e.g. ctDNA, are introduced, validation strategies for quantitative genetic tests are developed and practiced as well as validation of LDT NGS-panels.

List planned activities in 2024 for this Term of Reference

REVISION BEGINNER COURSE: The online format of the beginner course will be evaluated during the next intermediate course. Based on the experience of a first fully online course, a second course program in this format will be created as an alternative to the regular course. An course hand-out will be prepared accordingly.

REVISION ADVANCED COURSE: We have started to prepare a course handout with various exercises and background information. This handout has yet to be finalized.

Term of reference 2

BEGINNERS COURSE

List 2023 accomplishments for this Term of Reference

PRE-COURSE: The pre-course had to be postponed due to visa issues and was finally conducted in Mannheim from the 16th till 21st of October.

BEGINNER COURSE: Due to the shortage of tutors (as mentioned under term of reference 1) and visa issues, it was not possible to conduct the Beginners course in person. Thus, the format was changed to a one-week online course. All lectures were given in a plenary format while participants were divided into groups of 5 students for the wet-lab part. As we were only two official IFCC tutors (Prof. Ferreira-Gonzalez was only available in late afternoon due to the



time difference), our junior member and one further person from the laboratory in Mannheim supported us. We performed all experiments with three groups in parallel, followed by the same experiments with the other two groups. Accordingly, the number of experiments were reduced and the course comprised all steps from preparation of buffers, DNA isolation and quantification to PCR design and set-up.

Based on experience with an online course, however, it can be seen that conducting experiments with online supervision is very difficult, participants' mistakes cannot be adequately corrected and the learning success is significantly lower compared to an in-person course.

NOMINATION OF JUNIOR MEMBER: The junior member will be nominated after the second part of this course will be finished as it was not possible to get to know all participants during the online-course. Thus, the nomination for 2023 had to be postponed by three month.

List planned activities in 2024 for this Term of Reference

BEGINNER COURSE – PART II / INTERMEDIATE COURSE:

After alignment with Nader Rifai, the second part of the Beginners course will take place in person in Ilorin, Nigeria from 11th till 15th of March. This course will include all experiments that we could not perform during the online Beginners course (RFLP assays, ASA, qPCR, ...) and additionally some parts of the advanced course (validation strategies for qualitative and quantitative genetic tests). Therefore, this course will be somehow an intermediate course.

Again, we have a shortage of tutors for this course. In order to be able to conduct the course, a minimum of four tutors is necessary. Orland Diez, our junior member Nazli Caner and me will be able to go to Nigeria, and we will be accompanied by another expert in genetics. This was discussed with Nader Rifai in advance. As only the people, but not the number of tutors, will change, this will not affect the required budget.

REGULAR BEGINNERS COURSE:

Depending on applications, we will either have a normal beginners course or advanced course in addition to the intermediate course in 2024.

In case, the second 2024 course will be a Beginners course, following activities will take place:

PRE-COURSE: In advance to the beginners' course, a one-week pre-course in Mannheim will take place in case we will have another beginners course in 2024. In that case, a trainee nominated by the hosting society will travel to Mannheim and will conduct all experiments of the course in order to adapt the course layout according to local conditions of the host.

CALL FOR APPLICATION: the course should be announced via IFCC once more. Perhaps it would be better to change the title of the course to basic to intermediate course or something similar.

BEGINNER COURSE: As soon as we have identified a hosting country, the one-week course will take place in 2024.

NOMINATION OF JUNIOR MEMBER: In case, a beginners course will be conducted in 2024, a junior member for 2024 will be nominated.

Term of reference 3:

ADVANCED COURSE

List 2023 accomplishments for this Term of Reference

ADVANCED COURSE: An advanced course (with a revised course program, see above) was conducted in Vilnius, Lithuania.





List planned activities in 2024 for this Term of Reference

Depending on applications, we will either have a normal beginners course or advanced course in addition to the intermediate course in 2024.

In case, the second 2024 course will be an Advanced course, following activities will take place:

ADVANCED COURSE – CALL

A hosting society of the advanced course needs to be identified and a call for applications has to be prepared.

ADVANCED COURSE – ADVERTISEMENT

A report of the last advanced course in Lithuania is under preparation in cooperation with the Prof. Dalius Vitkus and – if possible – could be published in IFCC e-news.

ADVANCED COURSE: Preparation and conduction of the 4th Advanced Course in 2024.

Term of reference 4

PUBLICATION/GUIDANCE DOCUMENTS

List 2023 accomplishments for this Term of Reference

GUIDANCE DOCUMENT FOR PARTICIPANTS: a guidance document on primer/probe/assay design has been prepared as a step by step tutorial using free of charge online tools. This is provided to the participants.

We have not written any publications in 2023.

List planned activities in 2024 for this Term of Reference

Currently, there are no publications planned for 2024.

2023 MEETINGS / CONFERENCE CALLS HELD (VIRTUAL & IN PERSON)

ANNUAL MEETING: The annual meeting of the C-CMBC committee took place during the EuroMedLab in Rome.

Additionally, we had four online meetings within the year and met in person during the advanced course.

Committee for Evidence-based Laboratory Medicine (C-EBLM),

Chair: Annalise Zemlin (ZA)

TERMS OF REFERENCE

Reporting instructions for Terms of Reference for all Committees, Taskforces and Working Groups, please provide the following information

The main aim of the Committee on Evidence-based Laboratory Medicine (C-EBLM) of the International Federation of Clinical Chemistry and Laboratory Medicine (IFCC) is to disseminate information about Evidence-based Laboratory Medicine (EBLM)

Term of reference 1

Publications on EBLM

List 2023 accomplishments for this Term of Reference

Don-Wouchope AC, Rodriguez-Capote K, Assaad RS, Bhargava S, Zemlin AE. A guide to conducting systematic reviews of clinical laboratory tests. Clin Chem Lab Med 2023 Aug 4. doi: 10.1515/cclm-2023-0333. Epub ahead of print. PMID: 37531554.

List planned activities in 2024 for this Term of Reference

The following ideas for publication being discussed:

1. PICOT for the implementation of guidelines
2. The use of HbA1c test in various settings (members to perform local audits)

Term of reference 2

Congress attendance and dissemination of EBLM information

List 2023 accomplishments for this Term of Reference

- A. The following symposia were submitted and not successful:
 1. Evidence-based laboratory medicine and test utilization – APFCB, Sydney
 2. Evidence-based laboratory medicine and guideline development - Dubai
 3. Application of Evidence-Based Laboratory Medicine to guide Test Utilisation among Health Inequalities – AFCC, Egypt
- B. A collaborative symposium between C-EBLM, C-EUBD and C-PR titled “The value and evidence of laboratory tests used in the management of diabetes mellitus” was presented at ACBICON 2023 in Kerala, India in September 2023.
- C. The committee attended Euromedlab Rome in May 2023 and had a face-to-face meeting

List planned activities in 2024 for this Term of Reference

- A. A survey on EBLM is being developed to present as a poster in Dubai 2024
- B. A collaborative symposium between C-EBLM and C-POCT has been accepted for AFCC 2024. AZ will speak on behalf of C-EBLM and co-chair the session.
- C. AZ and SB will attend ACBICON in India in December 2024 and develop a symposium for submission

Term of reference 3

Webinars

List 2023 accomplishments for this Term of Reference

The following IFCC webinars were presented by C-EBLM in 2023:

1. Evidence-based Laboratory Medicine and inappropriate Laboratory testing (chair: ADW, speakers: KRC, HSC and Tim Lang (corresponding member))
2. Evidence-based laboratory medicine – systematic review and meta-analysis (chair: AEZ, speakers: ADW, RK, SB)



List planned activities in 2024 for this Term of Reference

The following webinar has been submitted for 2024:

The value and evidence of laboratory tests used in the management of diabetes mellitus

Discussion with TF-OSLM for a possible second webinar

Term of reference 4

guideline development / talks

List 2023 accomplishments for this Term of Reference

ADW and AZ attended the first meeting of the IFCC group on Clinical Laboratory Practice Guidelines

List planned activities in 2024 for this Term of Reference

C-EBLM members to assist with IFCC group on Clinical Laboratory Practice Guidelines

IFCC curriculum has been distributed and members will see where they can assist with talks for the eAcademy

ADDITIONAL INFORMATION

Activities not stated in 2023 workplan:

RK:

- February 19, 2023. Event: CHEMPATH 2023, Alexandria. Title: Evidence based endocrine testing.
- May 7, 2023. Event: ESLM 2023, Cairo. Title: Evidence based endocrinology lab practice.
- September 13, 2023. Event: EAEDA Summit 2023, Alexandria. Title: 2023 Updates for assessing and managing PCOS.

KRC:

- March 25, 2023: Event: InterQC Topics. Title: “Interferences in biochemical assays and their clinical significance”

SB:

- March 25, 2003: Event: ACBICON ODISHA, 2023. Title: “Does suboptimal vitamin D impact the outcome of COVID19? – Evidence from the first and second waves in a tertiary care hospital of India”
- April 24, 2023: Event: International Lab Professionals CME 2023; AIIMS Jodhpur. Evidence-based laboratory medicine – an introduction

2023 MEETINGS / CONFERENCE CALLS HELD (VIRTUAL & IN PERSON)

5 meetings were held in 2023:

20 Feb (online), 23 May (face-to-face Rome), 21 Aug (online), 27 Sept (online) and 24 Oct (online)

MEETING SCHEDULE IN 2023

Minimum quarterly and one face-to-face in Dubai

PUBLICATIONS/CONFERENCE PRESENTATIONS/WEBINARS

Please see above

Publication:

Don-Wouchope AC, Rodriguez-Capote K, Assaad RS, Bhargava S, Zemlin AE. A guide to conducting systematic reviews of clinical laboratory tests. Clin Chem Lab Med 2023 Aug 4. doi: 10.1515/cclm-2023-0333. Epub ahead of print. PMID: 37531554.

Webinars IFCC:

1. Evidence-based Laboratory Medicine and inappropriate Laboratory testing
2. Evidence-based laboratory medicine – systematic review and meta-analysis

Symposium ACBICON – in collaboration with C-EUBD and C-PR

Committee on Clinical Laboratory Management (C-CLM),

Chair: Praveen Sharma (IN)

TERMS OF REFERENCE

Reporting instructions for Terms of Reference for all Committees, Taskforces and Working Groups, please provide the following information

Term of reference 1

To promote the development of clinical laboratory leaders focusing on skills in:

- Laboratory Leadership
- Team Management
- Laboratory Workload Planning
- Goal Setting
- Strategic Planning and Gap Analysis
- Financial Management
- Quality Management & Continuous Quality Improvement
- Quality Tools and Methods
- Risk Management
- Project Management
- Test Utilization Management
- Motivating Staff and Human Resource Management
- Culture of Quality
- Customer Focus and Patient Safety



List 2023 accomplishments for this Term of Reference

1. PS delivered multiple invited talks on
 - a. "The Supply Side of Laboratory Medicine in India" at the LMCE 2023 (Laboratory Medicine Congress & Exhibition) & KSLM 64th Annual Meeting scheduled from 18-20 October 2023, in Suwon
 - b. "Haemoglobin A1c: POCT or Laboratory?" at the Medlab Asia & Asia Health Exhibition & Congress on 18 August 2023, in Thailand
 - c. "Risk management in clinical laboratory" at the College of Chemical Pathologists of Sri Lanka, 8th Annual Academic Sessions 2023 held on 14th and 15th July 2023 at Kandy, Sri Lanka
2. (2) RE delivered multiple invited talks at
 - a. Faculty of Health Sciences, National University of Malaysia on 12th April, 2023. Title of talk: "Therapeutic Drug Management"
 - b. 5th ASOMH Annual Scientific Meeting 8-9 May, 2023. Title of talk: "Preparing Allied Health Professionals (AHPs) for Value Based Healthcare"
 - c. Pathology Department HSNZ Educational Program on 16th May, 2023. Title of talk: "Risk Management in Medical Laboratory"
 - d. My BioMed Symposium on "Navigating the Biomedical Sciences Landscape in Tackling Health Crisis" on 9th August, 2023 - Panel for the Allied Health Professional's (AHP) Forum 2023
 - e. 7th Congress of Asia Association of Medical Laboratory Scientists (AAMLS 2023) Pre-Conference workshop with the theme "The Impact of ISO 15189:2022 on Laboratory Quality Management" on 9th October, 2023. Title of talk: "Risk based approach in ISO 15189:2022"
3. RE conducted multiple workshops
 - a. Risk Management in Pathology Lab – Anat Path Management Workshop – Hospital Tuanku Fauziah, Kangar – 8th March 2023
 - b. Risk Management workshop – Premier Integrated Labs, 15th -16th March, 2023
 - c. Training on ISO 15189, International Islamic University Malaysia, Kuantan 6th -7th Nov 2023
4. (MA delivered an invited talk on "What is the Impact of Supply Chain Issues on Patient Care?" at Ohio Collaborative Laboratory Conference, in April 2023
MA was a round table speaker at American Association of Clinical Chemistry Annual Scientific Meeting (AACC) 2023, Anaheim, and delivered a talk titled "Strategic Planning in Laboratory Medicine"
5. (4) MG delivered an invited talk on "Clinical Decision Tools in the New Era of Healthcare - Value of Clinical Laboratories in Clinical Decision" at the National Biochemistry Congress 2023 of Turkish Biochemical Society on 1 November 2023
MG delivered a talk on "Digital Transformation: What to do and How to do", on 12 September 2023 as a part of the EFLM Webinar

List planned activities in 2024 for this Term of Reference

1. To contribute to a IFCC Live Webinar (Topic: Global chain management issues)
2. To deliver talks at various conferences to promote the development of clinical laboratory leaders.

Term of reference 2

Produces educational and training materials on laboratory leadership in the form of:

- Publications including monographs, handbooks, and guides.
- Workshops
- Seminars
- Courses

List 2023 accomplishments for this Term of Reference

1. C-CLM members participated in the preconference workshop and symposia in the 33rd Annual Conference of Malaysian Association of Clinical Biochemists (MACB), Kuala Lumpur, from September 4-6, 2023. (Supported by VLP)
 - a. IFCC - C-CLM - MACB Workshop: "Benchmarking Quality performance in the Clinical Laboratory" on September 4th, 2023.
RE: Organiser and Chairperson
MG - Concept and Framework of Auto verification
PM - Analytical Quality Goal Specifications
MA - Moving Averages: Impact of Implementing Patient-Based Quality Control
 - b. IFCC - C-CLM - MACB Symposia: "Innovative Solutions in Laboratory Medicine" on September 5th, 2023.
RE: Organiser and Chairperson
PM - Artificial Intelligence in Laboratory Medicine
MG - Digital Transformation of Clinical Laboratories
MA - Strategic Innovation in Laboratory Medicine
2. C-CLM members participated in IFCC C-CLM symposia at the 49th Annual Conference of the Association of Clinical Biochemists of India (ACBICON), Thiruvananthapuram, Kerala, India on September 14th, 2023.
Shruti Gupta (SG) (Corresponding member, IFCC C-CLM) – Good Laboratory Practices: A managerial responsibility
PM - Leading a Clinical Laboratory: Importance of Leadership Development
PS - The Role of Emotional Intelligence in Leadership Development

List planned activities in 2024 for this Term of Reference

The committee is working on publishable guidance short booklet with the following titles

- A. "Essential Problem-Solving Tools for Quality Improvement"
- B. "Essentials of Project Management for Laboratory Leaders"

The materials are being reorganised & the committee plans to finalise and publish these booklets in 2024.



Term of reference 3

Provides learning resources on topics related to clinical laboratory management.

List 2023 accomplishments for this Term of Reference

List planned activities in 2024 for this Term of Reference

The committee is working on a publishable guidance short booklet with the title “Essential Set-up for Compliance with Quality Management Requirements”

Term of reference 4

Collaborates with other IFCC committees, workgroups, and task forces in the above activities.

List 2023 accomplishments for this Term of Reference

C-CLM members participated in the Point-of-care testing: Home, Hospital and Beyond, POCT satellite meeting in May 2023, Rome

PS: Haemoglobin A1c: POCT or laboratory?

PM: Challenges and Resolutions in Competency Training

List planned activities in 2024 for this Term of Reference

Term of reference 5

Administers surveys on specific areas of laboratory management and establishes a database and plans for preparation of new educational materials based on the results obtained from survey activities.

List 2023 accomplishments for this Term of Reference

The survey on “Global Supply Chain Management Issues in Clinical Laboratories” has been completed and data generated. Preliminary survey results are being analysed.

List planned activities in 2024 for this Term of Reference

The survey report will be submitted to IFCC; results will be analysed in detail and published in 2024.

ADDITIONAL INFORMATION

PM, MA and MG were selected as an IFCC Abbott Visiting Lecturers to participate in the 33rd Annual Conference of the Malaysian Association of Clinical Biochemists (MACB), 2023, Kuala Lumpur, Malaysia.

C-CLM members submitted a proposal to COLABIOCLI 2024 to be held in October 2024 at Cartagena, Columbia

C-CLM members will be conducting a symposium at the 50th National conference of India, ACBICON, in December 2024 at Chandigarh, India

2023 MEETINGS / CONFERENCE CALLS HELD (VIRTUAL & IN PERSON)

- IFCC C-CLM had a functional group meeting in the IFCC World lab Congress 2023 in Rome on 23 May 2023.

- C-CLM met via zoom conference calls arranged on 18 February 2023 and 3 November 2023.

Total meetings = 3 (In person-1, Virtual-2)

MEETING SCHEDULE IN 2024

- Functional committee meeting of IFCC C-CLM has been scheduled in IFCC World Lab Congress at Dubai (May 2024)
- At least two virtual meetings will be planned.

PUBLICATIONS/CONFERENCE PRESENTATIONS/WEBINARS

1. Mitra, P., Gupta, S. & Sharma, P. Role of Supply Chain Management in Clinical Laboratory. *Ind J Clin Biochem* 39, 1–2 (2024).
<https://doi.org/10.1007/s12291-023-01178-5>
2. Mitra, P., Gupta, S. & Sharma, P. Artificial Intelligence in Clinical Chemistry: Dawn of a New Era?. *Ind J Clin Biochem* 38, 405–406 (2023).
<https://doi.org/10.1007/s12291-023-01150-3>
3. Gungoren MS. Crossing the chasm: strategies for digital transformation in clinical laboratories. *Clin Chem Lab Med*. 2023 Feb 9;61(4):570-575.
doi: 10.1515/cclm-2022-1229. PMID: 36753305.
4. Ali, M. Strategic Planning in Laboratory Medicine. Nov.1.2023 *Clinical Laboratory News*

Conference presentations and webinars are already mentioned in previous boxes.

Committee for the Education in the Use of Biomarkers in Diabetes (C-EUBD), Chair: Emma English (UK)

TERMS OF REFERENCE

Reporting instructions for Terms of Reference for all Committees, Taskforces and Working Groups, please provide the following information

Term of reference 1

To maintain and further develop the network of reference laboratories for the measurement of HbA1c (through collaboration with C-TLM)

1. **Continue to provide oversight of IFCC HbA1c Reference Laboratory network:** The committee continues to have oversight of the Reference Laboratory Network and will receive an annual report for the network coordinator for consultation and feedback. With thanks to Carla Siebelder for the presentation of this data from the 2023 IFCC HbA1c Kotten study.
2. **Continue to expand and deliver the EurA1c study** – The committee received updates on progress of the EurA1c study in Rome and a written report in September 2023. With thanks to Carla Siebelder for this report. A draft paper for the EurA1c was suggested, timeline to be confirmed (due to a variety of reasons).

List planned activities in 2024 for this Term of Reference

1. The next update from the Reference laboratory network will be in Dubai 2024 where the data from the Rome studies will be presented.

2. A draft of the EurA1c will be drafted with support from the ERL. This will now be drafted and submitted, mid 2024.

Term of reference 2, 3 and 6

To work in partnership with WHO and IDF to continue to promote the reporting of HbA1c in line with the consensus statement

To work in partnership with WHO and IDF to facilitate the development and implementation of international guidelines for the use of HbA1c in the diagnosis of diabetes

To work with WHO and TF-POCT to recommend best practice in the use of POCT methods for the measurement of HbA1c



List 2022 accomplishments for this Term of Reference:

1. Development of guidelines for the World Health Organization (WHO) prequalification of BGM and POCT HbA1c devices – This activity has been a great success in promoting the work of the committee and IFCC more broadly. The draft TSS documents for both HbA1c POCT and blood glucose measurement have been completed. Members of this and other committees or working groups of the IFCC (WG-GMECC, C-POCT, SD) were actively and extensively involved in both the drafting and critical review of the documents
2. Initial stages to set up a Prequalification Laboratory for WHO – Work has started on next phase of this activity is to work with WHO to create the first Prequalification Evaluation Laboratory (PEL) for HbA1c, which is required in order for the prequalification process to be completed. The PEL is commissioned to undertake independent evaluations of products on behalf of WHO.

List 2023 accomplishments for this Term of Reference

1. **Development of guidelines for the World Health Organization (WHO) prequalification of BGM and POCT HbA1c devices** – This activity continues to be great success in promoting the work of the committee and IFCC more broadly. The draft TSS documents for both HbA1c POCT and blood glucose measurement have been completed. In 2023 the HbA1c pre-qualification documents, TSS 18, went through external peer review and public consultation for final approval (final document can be found here:

<http://extranet.who.int/prequal/key-resources/documents/tss18-hba1c-poc>)

TSS19) blood glucose is in the final stages of approval (and can be found here: https://extranet.who.int/prequal/sites/default/files/document_files/TSS-19_BGM_Public-Comment_DRAFT.pdf)

Members of this and other committees or working groups of the IFCC (WG-GMECC, C-POCT, SD) were actively and extensively involved in both the drafting and critical review of the documents.

2. **Initial stages to set up a Prequalification Laboratory for WHO** – Work has started on next phase of this activity is to work with WHO to create the first Prequalification Evaluation Laboratory (PEL) for HbA1c, which is required in order for the prequalification process to be completed. The PEL is commissioned to undertake independent evaluations of products on behalf of WHO. In 2023 all of the required documentation to support the provision has been drafted by the ERL and shared with WHO.

The protocols for the independent evaluation of HbA1c POC IVDs were drafted (by EE and ELW), reviewed and refined in 2023, we hope these will be approved in 2024.

List planned activities in 2024 for this Term of Reference

1. this work is largely complete however we will now support the WHO to implement the TSS documents and will educate manufacturers on the process at the next joint IFCC/NGSP manufacturers forum at the ADLM in 2024
2. we will continue to work with WHO to support final approval of both the protocol for independent evaluation of devices and to become the first WHO PEL for HbA1c POC IVDs

Term of reference 4

To work with IFCC Corporate Members to develop a consensus position on the information to be included in the Instructions for Use (IFU) as it relates to the clinical use of HbA1c methods

List 2023 accomplishments for this Term of Reference

1. Undertake a listening exercise with global manufacturers for HbA1c: We undertook a very successful listening exercise with a large group of representatives from the key manufacturers of HbA1c IVDs. This was held at the ADLM (formerly AACC meeting in Anaheim in 2023). The Chair of the NGSP (David Sacks, who is also a consultant member of the IFCC-EUBD) and EE the Chair of the EUBD both presented data around key issues pertaining to HbA1c measurement. CS presented data on the IFCC network and EurA1c trials. For the listening exercise an interactive Q&A session was undertaken using real time voting. Through the use of QR codes we also actively promoted and distributed our article on Weykamp C, Siebelder C, Lenters E, Slingerland R, English E. The risk of clinical misinterpretation of HbA1c: Modelling the impact of biological variation and analytical performance on HbA1c used for diagnosis and monitoring of diabetes. Clin Chim Acta. 2023 Aug 1;548:117495. doi: 10.1016/j.cca.2023.117495. Epub 2023 Jul 20. PMID: 37479013 – as it was ‘hot of the press’
Requests for presentations to manufacturers have reduced in recent years in response to both the covid pandemic and global financial strains. However, some still took place:
Scientific Event organized by Roche Vietnam: August 2023; Speaker Dr Erna Lenters: Hemoglobin A1c: Standardization, Analytical performance and Interpretation. Speaker Dr Erna Lenters: Sharing experience of a European Reference Laboratory about quality of HbA1c Testing of different manufacturers.
Tosoh Distributor Meeting at the 2023 AACC Annual Scientific Meeting & Clinical Lab Expo: Speaker: Dr Erna Lenters: Results of evaluation of Tosoh GR01
Menarini Users Day February 2023, Brussels; Speaker Dr Erna Lenters: The Next Analyser for HbA1c.
There has been a continual correspondence with manufacturers of laboratory HbA1c devices, throughout this year – in regard to the implementation of very strict IQC criteria in Germany. Discussions and support to manufacturers is ongoing.

List planned activities in 2024 for this Term of Reference

1. **Listening exercise 2.0: you said we did:** We will build on the successful listening exercise of 2023 with a second session at the ADLM in 2024. We will update manufacturers on current projects and where appropriate respond to the key topics that arose from the first meeting with a ‘you said, we did’ session as well.





Term of reference 5 and 7

Develop quality targets for the measurement of HbA1c and other biomarkers, and on the basis of these targets, and in conjunction with professional bodies, advise on the use of biomarkers for monitoring, diagnosis and screening of diabetes and glucose intolerance.

To evaluate the clinical value of emerging biomarkers (e.g. glycated albumin) for the management of patients with diabetes and to establish whether there is a case for method harmonisation of effective new biomarkers

List 2023 accomplishments for this Term of Reference

- 1. Further develop our understanding of the analytical and clinical utility of glycated albumin (GA) measurement Task A** - A publication on Understanding the harmonisation of glycated albumin methods (which includes data from analytical studies by EL and EK). This article has been re-drafted in light of new information from manufacturers but is now at submission.
- 2. Further develop our understanding of the analytical and clinical utility of glycated albumin (GA) measurement – Task B** - produce a systematic review article on the clinical utility of GA in diabetes. A detailed protocol was drafted an initial searches undertaken. A systematic review article published mid 2022 covered one of the core topics we intended to cover. This necessitated adjustments to the protocol including The changes have been made to the protocol, the searches have been completed and final selection of articles is underway.

List planned activities in 2024 for this Term of Reference

1. Respond to reviewers comments and anticipate acceptance for publication.
2. This publication is still under development, however additional resources have been identified to enable its completion this year.

Term of reference 8

To evaluate the emerging importance of post translational modification derived products (PTMDPs), and especially Advanced Glycation End-Products (AGEs), and work with Professional bodies on the best way of developing these for use in diabetes.

List 2023 accomplishments for this Term of Reference

The activities here link to 5 and 7 above but no further activities have been undertaken. .

List planned activities in 2024 for this Term of Reference

N/A – see additional comments

Term of reference 9

To monitor the literature and advise on best practice in relation to laboratory aspects of diabetes.

List 2023 accomplishments for this Term of Reference

Publications by committee members:

Haemoglobin A1c point-of-care analysers for professional use. Geneva: WorldHealth Organization; 2023 (Technical specifications series for submission to WHO prequalification – diagnostic assessment, TSS18). Emma English and Erna Lenters-Westra lead authors.

Weykamp C, Siebelder C, Lenters E, Slingerland R, English E. The risk of clinical misinterpretation of HbA1c: Modelling the impact of biological variation and analytical performance on HbA1c used for diagnosis and monitoring of diabetes. *Clin Chim Acta*. 2023 Aug 1;548:117495. doi: 10.1016/j.cca.2023.117495. Epub 2023 Jul 20. PMID: 37479013.

Lenters-Westra E, English E. Innovations in HbA1c analysis: finding the balance between speed and accuracy. An investigation of a potential new Secondary Reference Measurement Procedure for the IFCC. *Clin Chem Lab Med*. 2023 Oct 24. doi: 10.1515/cclm-2023-1070. Epub ahead of print. PMID: 37870921.

Kilpatrick ES, Butler AE, Saeed S, Alamuddin N, Atkin SL, Sacks DB. The effectiveness of blood glucose and blood ketone measurement in identifying significant acidosis in diabetic ketoacidosis patients. *Diabetol Metab Syndr*. 2023 Oct 13;15(1):198. doi: 10.1186/s13098-023-01176-w. PMID: 37828619; PMCID: PMC10571296.

Kilpatrick ES, Butler AE, Atkin SL, Sacks DB. Establishing Pragmatic Analytical Performance Specifications for Blood Beta-Hydroxybutyrate Testing. *Clin Chem*. 2023 Apr 28;69(5):519-524. doi: 10.1093/clinchem/hvad020. PMID: 36919618.

Bures J, Kohoutova D, Skrha J, Bunganic B, Ngo O, Suchanek S, Skrha P, Zavoral M. Diabetes Mellitus in Pancreatic Cancer: A Distinct Approach to Older Subjects with New-Onset Diabetes Mellitus. *Cancers (Basel)*. 2023 Jul 19;15(14):3669. doi: 10.3390/cancers15143669. PMID: 37509329; PMCID: PMC10377806.

Hoskovec D, Krška Z, Škrha J, Klobušický P, Dytrych P. Diagnosis and Surgical Management of Insulinomas-A 23-Year Single-Center Experience. *Medicina (Kaunas)*. 2023 Aug 4;59(8):1423. doi: 10.3390/medicina59081423. PMID: 37629713; PMCID: PMC10456644.

Presentations by committee members:

49th ACBICON, Kerala, September 2023: The value and evidence of laboratory tests used in the management of diabetes mellitus (IFCC/EBLM Evidence-based laboratory medicine) speaker from EUBD Dr Emma English: HbA1c – pros and cons

Scientific Event organized by Roche Vietnam: August 2023; Speaker Dr Erna Lenters: Hemoglobin A1c: Standardization, Analytical performance and Interpretation. Speaker Dr Erna Lenters: Sharing experience of a European Reference Laboratory about quality of HbA1c Testing of different manufacturers.

NGSP/IFCC Manufacturer forum at the 2023 AACC Annual Scientific Meeting & Clinical Lab Expo: Speaker from EUBD, Dr Emma English: IFCC C-EUBD – updates and key developments

NGSP/IFCC Manufacturer forum at the 2023 AACC Annual Scientific Meeting & Clinical Lab Expo: Speaker from EUBD, Carla Siebelder: IFCC Network update: IFCC Roadmap: Optimum Performance HbA1c

Tosoh Distributor Meeting at the 2023 AACC Annual Scientific Meeting & Clinical Lab Expo: Speaker: Dr Erna Lenters: Results of evaluation of Tosoh GR01

Menarini Users Day February 2023, Brussels; Speaker Dr Erna Lenters: The Next Analyser for HbA1c.

List planned activities in 2024 for this Term of Reference

Publications on EurA1c, glycated albumin, 1x educational materials

Proposals for webinars have been submitted. The first is a joint session with the EBLM on laboratory testing for diabetes. This will take place in April 2024



The second proposal is on behalf of the EUBD and includes sessions on POCT for HbA1c, big data for HbA1c and HbA1c and genomic medicine. Proposed delivery date is late 2024 due to maternity leave of one of the speakers.

ADDITIONAL INFORMATION

At the meeting of the committee in Rome, there were extensive discussions around redefining the TORs for the committee to align them more closely with the practice of the committee. These will be confirmed at the meeting in Dubai and the relevant persons informed and websites etc updated.

The planned activities have broadened the focus of the committee to beyond HbA1c and as such there is a lot of development work underway. The remit of the committee as an education focused committee has been bolstered and significant groundwork has been laid to improve provision of educational material beyond invited seminars and workshops. Overall, the objectives of the work plan are progressing well, and the group is working well. In addition, the impact of Covid-19 has been very important as it halted all travel for nearly 3 years, therefore a lot of the educational seminars and workshops that were planned did not go ahead. Whilst there is some return of these activities the levels are not anywhere near pre-pandemic levels. In response to this we have worked to create more diverse approaches to developing educational resources. Whilst we initially hoped to publish a key resource on CGM and HbA1c in Diabetes Care, we felt that what the journal wanted and what we aimed to achieve did not align. Attempting to develop material for this publication has caused a significant delay so we have made the decision to review, revise and submit to an alternative journal in spring 2024.

2023 MEETINGS / CONFERENCE CALLS HELD (VIRTUAL & IN PERSON)

Rome 2023

Various group and individual meetings approx. every month around various projects.

MEETING SCHEDULE IN 2024

Dubai 2024 for in person

PUBLICATIONS/CONFERENCE PRESENTATIONS/WEBINARS

See ToR 4 and 9

Committee on Clinical Applications of Cardiac Bio-Markers (C-CB), Chair: Kristin Moberg Aakre (NO)

TERMS OF REFERENCE

Reporting instructions for Terms of Reference for all Committees, Taskforces and Working Groups, please provide the following information

Overall aim: To develop and disseminate educational documents, materials and scientific presentations targeted towards clinical and analytical applications of cardiac biomarkers including, but not limited to, cardiac troponin (high-sensitivity, contemporary and point-of-care assays), natriuretic peptides (BNP, NT-proBNP assays) and emerging novel biomarkers.

Deliverables include:

1) published manuscripts, 2) biomarker reference tables, 3) webinars, 4) podcasts and social media.

Term of reference 1 (Published manuscripts (educational))

List 2023 accomplishments for this Term of Reference

The group have published the following educational documents in 2023:

1. Lower Limits for Reporting High-Sensitivity Cardiac Troponin Assays and Impact of Analytical Performance on Patient Misclassification. Aakre KM, Apple FS, Mills NL, Meex SJR, Collinson PO; International Federation of Clinical Chemistry Committee on Clinical Applications of Cardiac Biomarkers (IFCC C-CB). Clin Chem. 2023 Dec 15:hvad185. doi: 10.1093/clinchem/hvad185.
2. Cardiac Troponin Reporting in Children and Young Adults: Time to Change Clinical Practice. Aakre KM, Meex SJR, Mills NL. Circulation. 2023 Jul 4;148(1):17-19. doi: 10.1161/CIRCULATIONAHA.123.065297.
3. Single Troponin Measurement to Rule Out Myocardial Infarction: JACC Review Topic of the Week. Jaffe AS, Body R, Mills NL, Aakre KM, Collinson PO, Saenger A, Hammarsten O, Wereski R, Omland T, Sandoval Y, Ordonez-Llanos J, Apple FS; IFCC Committee on Cardiac Bio-Markers. J Am Coll Cardiol. 2023 Jul 4;82(1):60-69. doi: 10.1016/j.jacc.2023.04.040
4. Antibody-mediated interferences affecting cardiac troponin assays: recommendations from the IFCC Committee on Clinical Applications of Cardiac Biomarkers. Hammarsten O, Warner JV, Lam L, Kavsak P, Lindahl B, Aakre KM, Collinson P, Jaffe AS, Saenger AK, Body R, Mills NL, Omland T, Ordonez-Llanos J, Apple FS. Clin Chem Lab Med. 2023 Mar 24;61(8):1411-1419. doi: 10.1515/cclm-2023-0028.
5. Cardiac troponin measurement at the point of care: educational recommendations on analytical and clinical aspects by the IFCC Committee on Clinical Applications of Cardiac Bio-Markers (IFCC C-CB). Collinson P, Aakre KM, Saenger A, Body R, Hammarsten O, Jaffe AS, Kavsak P, Omland T, Ordonez-Llanos J, Karon B, Apple FS. Clin Chem Lab Med. 2023 Jan 16. doi: 10.1515/cclm-2022-1270

List planned activities in 2024 for this Term of Reference

The group is working on the following manuscripts, to be published in 2024/25:

1. Cardiac markers in AI
2. Troponins in children
3. The use of NP to select patients for risk of HF who should have early treatment

Term of reference 2 (Biomarker reference tables)

List 2023 accomplishments for this Term of Reference

The tables are available at the IFCC website. They have been updated twice during 2023.

<https://ifcc.org/ifcc-education-division/emd-committees/committee-on-clinical-applications-of-cardiac-bio-markers-c-cb/biomarkers-reference-tables/>

List planned activities in 2024 for this Term of Reference

We plan to update the tables 2-3 times during 2024.



Term of reference 3 (Webinars and congress presentations)

List 2023 accomplishments for this Term of Reference

The group has delivered the following webinars in 2023:

1. High sensitivity troponin point of care assays (2nd March)
2. Single-sample rule-out of NSTEMI-are we ready for prime time? (17th of May)
3. Interference on high sensitivity troponin assays (10th October)
4. R and D is good for you - a guide how to become researchers (12th December)

The group has delivered the following congress presentations in 2023:

1. IFCC Congress, Rome, May 2023: Debate: Cardiac Biomarkers in Risk Stratification: Laboratory Medicine Approach & Cardiac biomarkers in risk stratification: the need for more data
2. AACC, Anaheim, July 2023: High-Sensitivity Troponin: Strategies and Future Opportunities to Improve Patient Care
3. AACC, Anaheim, July 2023: High-Sensitivity Cardiac Troponin: Updates on Educational Recommendations from the IFCC Committee on Clinical Applications of Cardiac Biomarker
4. Turkish Biochemical society International Biochemistry Congress 2023, 31st October, Fethiye: Recent update on educational recommendations from the IFCC Committee on Clinical Application of Cardiac Bio-Markers
5. Turkish Biochemical society International Biochemistry Congress 2023, 31st October, Fethiye: Establish your own research - a roadmap for young investigators (20 minutes)
6. 6EFLM Webinar 7th November 2023: Analytical performance necessary for analyzing cardiac troponins by POC instruments.

List planned activities in 2024 for this Term of Reference

The group has submitted a proposal for the following webinars for 2024:

1. Current and future perspectives on measuring natriuretic peptides
2. Troponin assays with higher clinical specificity; a novel future option

The group has suggested the following congress presentations in 2024:

1. AFCC Congress Cairo: Current and future perspectives on cardiac biomarkers. This symposia discuss single sample rule-out of NSTEMI in the ED, long-term risk prediction, analytical considerations for measuring hs-cTn and sex differences in cardiac biomarkers.
2. COLABIOCLI congress in Cartagena: Current and future perspectives on cardiac biomarkers. This symposia focus on utility of POC instruments, more specific troponin assays, AI guided support for the use of cardiac biomarkers and how cTn measurements may be used to predict the need of imaging investigations.

Term of reference 4 Podcast and social media)

List 2023 accomplishments for this Term of Reference

1. The group started to produce podcasts Q3 2023. Two podcasts are available at the website and two more are in production (will be available late 2023/early 2024).
2. <https://ifcc.org/ifcc-education-division/emd-committees/committee-on-clinical-applications-of-cardiac-bio-markers-c-cb/podcasts/>
The group has a twitter account with some activity during 2023

List planned activities in 2024 for this Term of Reference

Main focus will be to produce more podcasts, the goal should be 8-10 episodes during 2024. We work with the IFCC how to disseminate these for a broader audience.

ADDITIONAL INFORMATION

This is a well functioning group where all members and consultancies are contributing actively to our work. The group meet monthly (outside holiday season) on a digital platform. Minutes are available on the groups webpage:

<https://ifcc.org/ifcc-education-division/emd-committees/committee-on-clinical-applications-of-cardiac-bio-markers-c-cb/previous-meeting-minutes/>

2023 MEETINGS / CONFERENCE CALLS HELD (VIRTUAL & IN PERSON)

See Terms of References (point 3).

MEETING SCHEDULE IN 2023

The group plan to meet physically 6-7th May in Boston USA and in late September Glasgow, UK. The group meet regularly (monthly, outside holidays) on a digital platform (TEAMS).

PUBLICATIONS/CONFERENCE PRESENTATIONS/WEBINARS

Through 2023 this group has published 5 papers, held 4 webinars and 3 congress symposia, see also Terms of references for details.

Committee on Kidney Diseases (C-KD), Chair: J. El Khoury (US)

TERMS OF REFERENCE

Reporting instructions for Terms of Reference for all Committees, Taskforces and Working Groups, please provide the following information

Term of reference 1

List 2023 accomplishments for this Term of Reference

1. Developed and presented a scientific session at the 2023 AACC Annual Meeting in Anaheim, CA on “Assessing Kidney Function by mGFR and eGFR: Current and Future Approaches” with Dr. Joe El-Khoury as moderator, and speakers Drs. Jesse Seegmiller and John Toffaletti.



2. Published Q&A in Clin Chem on “International Perspectives on GFR Estimation and Race-Based Adjustments” by El-Khoury JM, Karger AB, Cavalier E, Kalyesubula R, Teo BW, Costa E Silva VT, Inker LA. Clin Chem. 2023 Aug 2;69(8):796-802. doi: 10.1093/clinchem/hvad095.
3. Scientific session accepted for the IFCC WorldLab Dubai 2024 on “PRESENT AND FUTURE OF CHRONIC KIDNEY DISEASE AND ACUTE KIDNEY INJURY DETECTION”
Chair: Joe M. El-Khoury
 - A: Updates on new eGFR equations and acute kidney injury definitions
Joe M. El-Khoury
 - B: An update on albuminuria as a chronic kidney disease marker
Joris Delanghe
 - C: Everything is acute until it becomes chronic – biomarkers of kidney injury
Rajeevan Selvaratnam
 - D: Using machine learning methods and leveraging electronic health records for acute kidney injury detection and management
Lama Ghazi
4. Held successful meeting in EuroMedLab Rome 2023 with active participation by members who presented 3 talks and corresponding members who shared their perspectives on the field in their region. Dr. Graham Jones presented on “What does a good laboratory service for kidney function testing look like? And how do we help laboratories achieve this?”, Dr. Rajeevan Selvaratnam presented on “Factors to consider for baseline serum creatinine in AKI alerts”, and Dr. Flavio Alcantara presented on “Who art Thou? Naming kidney diseases, naming sample types, naming assays”.
5. Dr. Joe El-Khoury spoke at the National Kidney Foundation in Austin, TX on “What every nephrologist should know about laboratory testing”.

List planned activities in 2024 for this Term of Reference

1. IFCC Webinar has been submitted for 2024 and is currently under consideration. Titled “International Perspectives on Estimating Glomerular Filtration Rate Equations”, it will be chaired by Dr. Joe El-Khoury, with speakers Drs. Amy Karger, Etienne Cavalier and Verônica Torres da Costa e Silva.
2. Meet members and corresponding members at the IFCC Worldlab Dubai 2024 to review updates in the field.
3. Present our session at the IFCC WorldLab Dubai 2024.
4. Conduct an international survey on laboratory practices for testing kidney injury and disease.
5. Begin work on IFCC guidelines for the laboratory investigation of kidney injury and disease.

Term of reference 2

List 2023 accomplishments for this Term of Reference

List planned activities in 2024 for this Term of Reference

Term of reference 3

List 2023 accomplishments for this Term of Reference

List planned activities in 2024 for this Term of Reference

2022 MEETINGS / CONFERENCE CALLS HELD (VIRTUAL & IN PERSON)

December 4, 2023 (Virtual)

May 21, 2023 (In Person, Rome, EuroMedLab)

February 21, 2023 (Virtual)

MEETING SCHEDULE IN 2024

Planning for 4 meetings in the following timeframes:

Before March 30, 2024 (Virtual)

May 26, 2024 (In person, Dubai, IFCC WorldLab 2024)

September 2024 (Virtual)

December 2024 (Virtual)

PUBLICATIONS/CONFERENCE PRESENTATIONS/WEBINARS

1. Developed and presented a scientific session at the 2023 AACC Annual Meeting in Anaheim, CA on “Assessing Kidney Function by mGFR and eGFR: Current and Future Approaches” with Dr. Joe El-Khoury as moderator, and speakers Drs. Jesse Seegmiller and John Toffaletti.
2. El-Khoury JM, Karger AB, Cavalier E, Kalyesubula R, Teo BW, Costa E Silva VT, Inker LA. International Perspectives on GFR Estimation and Race-Based Adjustments. *Clin Chem*. 2023 Aug 2;69(8):796-802.
3. Dr. Joe El-Khoury spoke at the National Kidney Foundation in Austin, TX on “What every nephrologist should know about laboratory testing”.
4. Delanghe J, Speeckaert M, Delanghe S, Oyaert M. Pitfalls in the diagnosis of hematuria. *Clin Chem Lab Med*. 2023 Apr 24;61(8):1382-1387.
5. Delrue C, Speeckaert R, Delanghe JR, Speeckaert MM. Growth differentiation factor 15 (GDF-15) in kidney diseases. *Adv Clin Chem*. 2023;114:1-46.
6. Delanghe J, Oyaert M, De Buyzere M, Delanghe S, Speeckaert M. Glucosuria and interference of urinary albumin-to-creatinine ratio. *Kidney Int*. 2023 Jul;104(1):201.
7. Dhont E, Van Der Heggen T, Snauwaert E, Willems J, Croubels S, Delanghe J, De Waele JJ, Colman R, Vande Walle J, De Paepe P, De Cock PA. Predictors of augmented renal clearance based on iohexol plasma clearance in critically ill children. *Pediatr Nephrol*. 2023 Epub
8. Dr. Takashi Wada has 18 publications in 2023 related to kidney diseases that can be accessed here: <https://pubmed.ncbi.nlm.nih.gov/?term=takashi+wada+kidney&filter=years.2023-2023&sort=date&size=100>



Committee on Point-of-Care Testing (C-POCT),

Chair Adil I Khan (CA)

TERMS OF REFERENCE

Reporting instructions for Terms of Reference for all Committees, Taskforces and Working Groups, please provide the following information

Term of reference 1

To provide international leadership for developing the clinical practice of POCT in Laboratory Medicine

List 2023 accomplishments for this Term of Reference

Point-of-care testing performed by healthcare professionals outside the hospital setting: consensus-based recommendations from the IFCC Committee on Point-of-Care Testing (IFCC C-POCT). Clin Chem Lab Med. 2023 Jun 2;61(9):1572-1579. doi: 10.1515/cclm-2023-0502. PMID: 37267483.

Khan AI, Pratumvinit B, Jacobs E, Kost GJ, Kary H, Balla J, Shaw J, Milevoj Kopcinovic L, Vaubourdolle M, Oliver P, Jarvis PRE, Pamidi P, Erasmus RT, O'Kelly R, Musaad S, Sandberg S.

List planned activities in 2024 for this Term of Reference

1. IFCC Guideline on Point-of-Care Testing
2. IFCC/ADLM Guideline on Artificial Intelligence/Machine learning and Point-of-Care testing.

Term of reference 2

To create a forum for high level discussion on a wide range of POCT related topics

List 2023 accomplishments for this Term of Reference

1. POCT: Developing Community Resilience (webinar), Jan 18, 2023
2. Point-of-Care Testing: Bridging the Disparity Gap in Healthcare, Islamabad, Pakistan, Mar 9-10, 2023
3. Point-of-Care Testing: Home, Hospital & Beyond, Rome, Italy, May 20-21, 2023
4. POCT- in the hospital & beyond, 49th ABCICON, Kerala. India Sept 14-16, 2023
5. Point-of-Care Testing, 5th Virtual Congress of Clinical Biochemistry (VIRTUALAB 2023) Nov 14, 2023

List planned activities in 2024 for this Term of Reference

1. Point-of-Care Testing: State of the art and perspectives, Venice, Italy 4-5 April 2023
2. Current Status and Future Trends in Point-of-Care Testing, Dubai, UAE, 25 May 2024
3. Point-of-Care Testing: the never-ending challenges and their resolutions (webinar), September (TBD), 2024.
4. Improvements in healthcare through 21st Century innovations, Cartagena, CO, Oct 3-6 2024

5. Improving Wellness, Emergency Response, and Resilience with Prehospital Testing. Asian Pacific Federation of Clinical Biochemistry Regional Congress in Sydney, Australia on Oct 31- Nov 3, 2024.

Term of reference 3

To promote quality in the use, performance, interpretation and reporting of POCT across the full spectrum of clinical chemistry and laboratory medicine

List 2023 accomplishments for this Term of Reference

1. POCT: Transforming the future of Healthcare (webinar), Jan 18, 2023
2. POCT: Developing Community Resilience (webinar), Jan 18, 2023
3. Point-of-Care Testing: Bridging the Disparity Gap in Healthcare, Islamabad, Pakistan, Mar 9-10, 2023
4. Point-of-Care Testing: Home, Hospital & Beyond, Rome, Italy, May 20-21, 2023
5. POCT- in the hospital & beyond, 49th ABCICON, Kerala. India Sept 14-16, 2023
6. Point-of-Care Testing, 5th Virtual Congress of Clinical Biochemistry (VIRTUALAB 2023) Nov 14, 2023

List planned activities in 2024 for this Term of Reference

1. Point-of-Care Testing: State of the art and perspectives, Venice, Italy 4-5 April 2023
2. Current Status and Future Trends in Point-of-Care Testing, Dubai, UAE, 25 May 2024
3. Point-of-Care Testing: the never-ending challenges and their resolutions (webinar), September (TBD), 2024.
4. Improvements in healthcare through 21st Century innovations, Cartagena, CO, Oct 3-6 2024
5. Improving Wellness, Emergency Response, and Resilience with Prehospital Testing. Asian Pacific Federation of Clinical Biochemistry Regional Congress in Sydney, Australia on Oct 31- Nov 3, 2024.

2022 MEETINGS / CONFERENCE CALLS HELD (VIRTUAL & IN PERSON)

See Terms of Reference #2 and #3

MEETING SCHEDULE IN 2023

C-POCT Meetings held:

9th 10th and 11th February 2023

21 May 2023

21 & 22 September 2023

14 Nov 2023

PUBLICATIONS/CONFERENCE PRESENTATIONS/WEBINARS

1. POCT: Developing Community Resilience (webinar), Jan 18, 2023

Moderator: Prof. Adil I. Khan

Real-life performance of rapid antigen tests for COVID-19 – Prof. Julie Shaw

The COVID-19 Spatial Care Path: Home, Community, and Emergency Diagnostic Portals – Prof Gerald J Kost

How Point of Care Testing has leveraged Infectious Disease Management and Outcomes in Africa - Prof. Rajiv T Erasmus

2. Point-of-Care Testing: Bridging the Disparity Gap in Healthcare, Islamabad, Pakistan, Mar 9-10, 2023

How Can Point-of-Care Testing Bridge the Healthcare Disparity Gap? Dr. Adil I. Khan

POCT Experience in Shifa International Hospital Dr. Ghazanfar Abbas

QA Practices for POCT Program in Pakistan: From Briefing to Experience Dr. Lena Jafri

POCT Accreditation Dr. Muhammad Aamir

POCT in general practice and primary care Dr. Samarina Musaad

Use of cardiac Troponin in Rural Australia Rosy Tirimacco

Markers of traumatic brain injury (TBI) Dr. Paul Jarvis

Medical economics - blood management using TEG/ROTEM Dr. Michel Vaubourdolle

Quality Assurance Audits and Monitoring of Quality Indicators for POCT Dr. Julie Shaw

Quality Assurance in POCT: New developments in ABG Dr. Dr. Sohini Sengupta

How to set up a POCT service / program Ms Marianne Mulder

How to troubleshoot inaccurate results Dr. Prasad Pamidi

Identifying and using quality indicators Dr. Paloma Oliver

Home, Community, and Emergency Spatial Care Paths - Diagnostic Portals for COVID-19, Critical Care, & Superstorms Dr. Gerald Kost

Workshop Roche Team + Ms Afshan + Dr. Adil I. Khan

3. Point-of-Care Testing: Home, Hospital & Beyond, Rome, Italy, May 20-21, 2023

Intraoperative parathyroid hormone and cortisol monitoring

Ravinder J Singh (USA)

ABG in Critical Care Settings: the challenges & new age solutions

Sohini Sengupta (IN)

Point-of-Care Coagulation Testing in Cardiac Surgery

Daniel Bolliger (CH)

Ammonia at POC for diagnosis and management of inborn errors of metabolism

Gilbert Chu (USA)

POCT bilirubin management in neonates Agnès Mailloux (FR)

POCT in Hematology Ed Randell (CA)

Hemoglobin A1c: POCT or Laboratory? Praveen Sharma (IN)

POC Testing in Management of Chronic Diseases

Michel Vaubourdolle (FR)



Basic POCT for a doctor's office

Samarina Musaad (NZ) Direct-To-Consumer-Testing Sverre Sandberg (NO)

We must speak up: The role of laboratory medicine in direct-to- consumer testing

Matthias Orth (DE)

Establishing a National POCT Network in Wales

Annette Thomas (UK)

Ensuring Quality at the POC: What are the challenges and how do we overcome them

Scott Isbell (USA)

New Delivery Options for Point of Care and Laboratory Testing

James Nichols (USA)

Point of Care Innovative Technologies Trial (Delivery of virtual home monitoring and point-of-care pathology testing in general practice)

Rosy Tirimacco (AUS)

Point of Care Testing in the era of Personalized Medicine

Rajiv Erasmus (SA)

Point-of-Care Testing, Spatial Care Paths, and enhanced Standards of Care –Preparing Island Communities for Global

Warming and Rising Oceans

Gerald J. Kost (USA)

Method Evaluation of POC Tests

Ed Randell (CA)

Troubleshooting Inaccurate POC test results

Adil I. Khan (USA)

Role of the POC Coordinator

Paloma Oliver (SP)

Key Performance Indicators and audits in POC Testing

Julie Shaw (CA)

Internal and External Quality Control for POC

Sverre Sandberg (NO)

Challenges and Resolutions in Competency Training

Prasenjit Mitra (IN)

4. POCT- in the hospital & beyond, 49th ABCICON, Kerala. India Sept 14-16, 2023

5. Point-of-Care Testing, 5th Virtual Congress of Clinical Biochemistry (VIRTUALAB 2023) Nov 14, 2023

Committee for the Value Proposition in Laboratory Medicine (C-VPLM), Chair Andrew St. John (AU)

TERMS OF REFERENCE

Reporting instructions for Terms of Reference for all Committees, Taskforces and Working Groups, please provide the following information

Term of reference 1

To advocate adoption of the value proposition in laboratory medicine/healthcare Continuing work in the form of peer-reviewed publications, congress symposia and presentations to local meetings is required to describe and define the value proposition in laboratory medicine and to advocate its widespread adoption. During the first 3 years of this committee it is intended that this work would be restricted to laboratory medicine professionals albeit with interaction with appropriate clinical specialists relevant to the particular tests As the group expands the body of knowledge on the value proposition in firstly laboratory medicine and then in other healthcare disciplines then this work can extended.

List 2023 accomplishments for this Term of Reference

We prepared and submitted 3 publications describing different aspects of the value proposition. Two have been rejected by the journals to which they were submitted and one is under review.

Some members of the Committee will continue to work towards achieving publication of all 3 papers.

Speaking events included participating in symposium at WorldLab in Rome and the Committee provided the November 23 IFCC Webinar.

The Committee met regularly by Zoom and at two face to face meetings in 2023

List planned activities in 2024 for this Term of Reference

Not applicable – Committee has completed its second term.

However some of the members of the Committee are preparing a publication for the IFCC Journal which will summarise the experiences and achievements of the Committee over the last 6 years.

One member of the Committee is a speaker in a Value of Laboratory Medicine symposium to take place at WorldLab in Dubai.

Term of reference 2

Develop a compendium of tools for laboratory medicine specialists to establish the value for individual medical tests within individual health care systems. Case studies will be undertaken for specific medical tests according to the principles of the value proposition in specific healthcare systems. There is a need to develop the principles for the preparation of such case studies for publication in the current peer-reviewed journals in order that they reach the appropriate audience. This work has been commenced and will continue for 3 years. It will include test laboratories applying the value proposition framework to a particular medical test and assessing the outcomes. At the end of this period it is proposed that a compendium of tools generalisable for the preparation of documents demonstrating the value proposition for any medical test will be described in a major review publication



List 2022 accomplishments for this Term of Reference

Discussions took place in the first half of the year about organising a workshop designed to provide the tools and capabilities to conduct better test implementation. This was to be in collaboration with the IFCC Task Force on Outcomes and the IFCC EBLM Committee.

However such collaboration did not continue into the second half of the year, in part because there was doubt about the Committee continuing in 2024. The decision to discontinue with the Committee was confirmed in October and therefore plans for the Workshop were discontinued.

List planned activities in 2024 for this Term of Reference

Not applicable – Committee has completed its second term

ADDITIONAL INFORMATION

Some members of the Committee are continuing to work together informally to further develop the concepts of test implementation. We have no plans currently to collaborate with any other related groups.

2023 MEETINGS / CONFERENCE CALLS HELD (VIRTUAL & IN PERSON)

Face to face meetings at WorldLab Rome (May) and in Leiden, Netherlands (October)

Zoom Committee meetings held in February, March, April, June, July, September.

MEETING SCHEDULE IN 2023

See above

PUBLICATIONS/CONFERENCE PRESENTATIONS/WEBINARS

Three publications prepared:

1. Application of an implementation framework to facilitate the local introduction of patient self-monitoring of INR or PST
Accepted with major changes by CCLM and then rejected; next journal yet to be selected for new submission
2. The use of natriuretic peptides in assessing patients with suspected new onset chronic heart failure in primary care: a value proposition to support effective implementation.
Rejected by two journals – third journal yet to be selected.
3. Q and A for Clinical Chemistry - Challenges associated with the effective implementation of new laboratory tests – the international experience. Submitted for review in Jan 24

Conference presentations:

A St John – speaker in Symposium - Central Role of Clinical Laboratory in Public Health & Patient Care - at Rome WorldLab, May 23

IFCC Webinar – A St John, C Price and M O’Kane – Improved Implementation of Medical Tests – November 8, 2023.



Working Group Laboratory errors and patient safety (WG LEPS),

Chair: Mario Plebani (IT)

TERMS OF REFERENCE

Reporting instructions for Terms of Reference for all Committees, Taskforces and Working Groups, please provide the following information

Term of reference 1

List 2023 accomplishments for this Term of Reference

The IFCC Model of Quality Indicators (MQI) is receiving an increasing interest and in 2023 we have delivered many lectures both in presence and virtually

In particular,

List planned activities in 2023 for this Term of Reference

ACTIVITY 1: Lecturers, webinars and symposia


1. In the context of an EFLM Symposium at the Rome 2023 Worldlab-EuroMedlab, a lecture by Vincent De Guire has been delivered on “Assessing the robustness of the total testing process with quality indicators.
2. In the same symposium, Mario Plebani delivered an lecture on “outcome measurement and integration of quality measures in laboratory medicine.
3. **A Symposium has been organized on June 6th during the CSCC 2022 congress and the title of the talk was “Improving Patient Safety Through Quality Improvement in Laboratory Medicine” (speaker Mario Plebani and Vincent De Guire).**
4. August 2023, Palestinian Medical Technology Association (PMTA), lecture by Mario Plebani on Quality in laboratory medicine.
5. **In a session of the International Conference on Laboratory Medicine (Padova, September 20th) a lecture on Monitoring of the total testing Process Using quality indicators has been delivered by Vincent de Guire.**
6. A Symposium in Iran (virtual talk) on “Quality Indicators in laboratory medicine” was organized in July and Delivered by Mario Plebani and Vincent De Guire.
7. Webinar organized by the India National Society (November 2023).

ACTIVITY 2:

A proposal for a symposium at the Worldlab Dubai 2024 has been submitted but it was not accepted by the Scientific Committee (priority rate).

ACTIVITY 3:

1. A software for automated collection of data has been developed and currently installed in three italian laboratories.
2. Based on a collaboration between Vincent De Guire and Siemens, an IFCCQI dashboard was developed on the SiemensAtellica Process Managersoftware. This dashboard allows the automated calculation of key IFCC QIs and root cause analysis of performance facilitating quality improvement processes. The Dashboard will be launch more broadly in 2024.

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3. Members from Italy, Canada and Brazil have worked together to identify the best strategy to share QI data from national initiatives. A new strategy was identified to combine national quality specifications. This strategy will greatly increase the number of countries and laboratories providing data to establish international Quality Specifications for quality improvement.
 4. Collaborating with the WG-PRE of the EFLM, Vincent De Guire and Pieter Vermeersch of the WG-LEPS are working with other EFLM members on a proposal for the standardization of pre-analytical errors registration in LIS. Based on the MQI, the goal is to come to a proposal to LOINC and SNOWMED to create specific code for declaration of pre-analytical errors in the LIS at the international level. This standardization would facilitate data extraction and QIs calculation worldwide, thus promoting participation in the MQI program and the international comparison.
 5. Implementation of new QIs in POCT. The WG-LEPS is collaborating with the Canadian Society of Clinical Chemists to implement specific POCT QIs in the MQI.

List planned activities in 2024 for this Term of Reference

- 1. A new Consensus Conference to update the program on Quality Indicators has been organized and should be held in Quebec, Canada on June 19-20th 2024.** The consensus meeting, expected to span two days, is anticipated to bring together 15-20 members of the WG-LEPS from various parts of the world. Vincent De Guire and Mario Plebani have submitted a grant proposal to the Quebec ministry to secure 30 to 35K (CDN\$) for the event (under review). The Quebec Society of Clinical Biology have committed a 10K (CDN\$) and we are actively discussing with the Canadian Society as well as potential industrial partners for funding. Vincent De Guire and Mario Plebani are working on a VLP IFCC submission in collaboration with the Canadian Society to cover the travel expenses of 3 experts.
- 2. Promotion of new symposia and sessions at international and national meetings**
- 3. Further diffusion of the software for the automated collection of data on quality indicators**

ACTIVITY 4:

List 2023 accomplishments for this Term of Reference

List planned activities in 2024 for this Term of Reference

2023 MEETINGS / CONFERENCE CALLS HELD (VIRTUAL & IN PERSON)

1. In the context of an EFLM Symposium at the Rome 2023 Worldlab-EuroMedlab, a lecture by Vincent De Guire has been delivered on “Assessing the robustness of the total testing process with quality indicators.
2. In the same symposium, Mario Plebani delivered a lecture on “outcome measurement and integration of quality measures in laboratory medicine.
- 3. A Symposium has been organized on June 6th at the 2022 Canadian Society annual meeting and the title of the talk was “Improving Patient Safety Through Quality Improvement in Laboratory Medicine” (speaker Mario Plebani).**
4. August 2023, Palestinian Medical Technology Association (PMTA), lecture by Mario Plebani on Quality in laboratory medicine.



5. **In a session of the International Conference on Laboratory Medicine (Padova, September 20th) a lecture on Monitoring of the total testing Process Using quality indicators has been delivered by Vincent de Guire.**
6. A Symposium in Iran (virtual talk) on “Quality Indicators in laboratory medicine” was organized in July.
7. Webinar organized by the India National Society (November 2023).

MEETING SCHEDULE IN 2024

In person consensus group meeting in Quebec, Canada in June with the intent of updating the International QIs guidelines.

In preparation to the consensus group meeting, multiple virtual meetings will be held in 2024 within the WG-LEPS members.

PUBLICATIONS/CONFERENCE PRESENTATIONS/WEBINARS

1. Sciacovelli L, Padoan A, Aita A, Basso D, Plebani M. Quality indicators in laboratory medicine: state-of-the-art, quality specifications and future strategies. *Clin Chem Lab Med* 2023 Jan 23;61(4):688-695.
2. Plebani M, Aita A, Sciacovelli L. Patient Safety in Laboratory Medicine. 2020 Dec 15. In: Donaldson L, Ricciardi W, Sheridan S, Tartaglia R, editors. *Textbook of Patient Safety and Clinical Risk Management [Internet]*. Cham (CH): Springer; 2021. Chapter 24. PMID: 36315765.
3. Shaw JLV, Arnoldo S, Beach L, Bouhtiauy I, Brinc D, Brun M, Collier C, Kostantin E, Fung AWS, Füzéry AK, Huang Y, Kaur S, Knauer M, Labrecque L, Leung F, Shea JL, Thakur V, Thorlacius L, Venner AA, Yip PM, De Guire V. Establishing quality indicators for point of care glucose testing: recommendations from the Canadian Society for Clinical Chemists Point of Care Testing and Quality Indicators Special Interest Groups. *Clin Chem Lab Med* 2023 Apr 12;61(7):1280-1287.

Flow cytometry Working group (WG- FC),

Chair: Claude Lambert (FR)

TERMS OF REFERENCE

Reporting instructions for Terms of Reference for all Committees, Taskforces and Working Groups, please provide the following information

Term of reerence 1

List 2023 accomplishments for this Term of Reference

1. **Winterschool of Cell Analysis in Immunology in Geneva Leipzig From 6th to 10th of March, 2023**

Numerous candidates applied for the training and 18 were selected to ensure optimal conditions, particularly for wet lab and computer exercises. Participants came from Switzerland, France, Germany, Norway, Lithuania, Poland, Austria, Luxembourg, Spain, South Africa, Argentina, Romania, and Georgia. The teaching staff came from Switzerland, France, Luxembourg, Germany, Italy, and Morocco. The course covered deep phenotyping of T cells, B cells, dendritic cells, innate lymphoid cells, and myeloid cells through lectures and exercises. Functional tests, including cytoplasmic cytokines, basophil degranulation,

and phagocytosis were presented and tested in the wet lab. Advanced technologies such as 13-color panels, image, spectral, and mass cytometry were demonstrated, and multidimensional data analysis tools were used for training. All students enthusiastically followed the full program up to the "fondue." All but one passed the final exam with success.

2. Roma 2023 – Wordlab-Euromedlab 21-25 of may

Meeting of the working group in Roma. Very poor attendance. Discussion on the 2023 activity. Meeting of potential candidates to enter the working group. Meeting and preparation of the Workshop in India to be held in October.

3. National summer school on cytometry in Romania with the Romanian Association of Cytometry on 15-16th of June In Bucharest University Workshop on compensations, artefacts, Quifi kit, cytoplasmic labelling

The workshop has addressed the technical issues and risks of error in flow cytometry for beginners and experienced candidates in medical diagnosis and research cursus.

The course included theory in plenary session and practicals with wet lab and electronic data analysis and interpretation in 3 groups. 36 participants including a new team, beginners in this field from the main hospital in Moldavia and despite the nearby war in Ukraine. Numerous national academics from the Romanian Association of Cytometry. Participants appreciated a lot the course and are asking to renew it. The most interesting point was the progressive involvement of Romanian speakers that raise hope on the sustainability of this annual course since it started several years ago with the support of IFCC on the last 5 years.

Topics included :FCM principles, Applications, fluidics, optics, electronics, types of instruments, Luminita MARUTESCU, Facultatea de Biologie, Universitatea din București

Principle of fluorescence, fluorochromes, tandem dyes, interference, filter selection, optical bench Horia SANDU, Institutul Clinic Fundeni, București

Fluorescence detection, instrument settings, compensations Ion DUMITRU, Spitalul Universitar de Urgență București

Experimental design in research and clinics Livia SIMA, Institutul de Biochimie, Academia Română, București; Ion DUMITRU, Spitalul Universitar de Urgență București

Data analysis – research and clinical applications Raluca RĂUCESCU, Institutul Clinic Fundeni, București Bianca GĂLĂȚEANU, Facultatea de Biologie, Universitatea din București

4. 2023 IFCC LATIN AMERICAN FLOW CYTOMETRY COURSE, Bogota Columbia, 28-30 juin. More than 100 participants,

The workshop was organized in Columbia thanks the initiative and management of Beckman Coulter, in collaboration with Beckman Coulter marketing team in Latin America. The talks were mainly in Spanish.

The workshops was on 3 days, morning: lectures, afternoon practicals, with the best global flow cytometry speakers/KOL's, IFCC committee, Universidad El Bosque members (Bogotá, Colombia), channel partners and most important of all, more than 100 attendees from different parts of Latin America (Colombia, Brasil, México, Uruguay, Peru, Panamá, Ecuador, República Dominicana.).

Definitely, It was a high level scientific and academic environment where we had the opportunity to ask questions, talk, discuss and present ideas and studies in the Flow Cytometry arena.

The format of having theoretical classes in the mornings and practical classes in the afternoons (allowing a lot of interaction and exchange of experiences).really made a difference.



Also, the fact that Latam team got together on a weekly basis since January to organize all the event really caused this positive impact.

Themes were focused on Hematology, MRD, Nano particles, Cell Sorting, Immunology, Leukemia, Lymphoma.

5. 1st Workshop on Cytometry on immunology in India was held on 6-9th of November

Organized by Dr.Mithu Banerjee and Dr.SojitTomo Department of Biochemistry All India Institute of Medical Sciences (AIIMS) in Jodhpur with the support of Dr Praveen Sharma Chair, IFCC-Committee on Clinical Lab Management (CCLM) and Dr KuldeepSingh Dean of AIIMS Jodhpur.

The course included lectures and practicals (wet lab) and was then open to a limited number of participant. A total number of 17 delegates were selected from numerous candidatures. From all over the country participated in the workshop. The participants included students as well as faculty, from Jodhpur and other universities. This first initiative of IFCC in India, focused on primary detection of Immunodeficiencies. This diagnosis remains surprisingly rare in India, probably due to the lack of strategy for an early diagnosis. The initiative opened new link between biology team and clinician.

Dr. Amit Rawat, Professor of Pediatric Allergy and Immunology, Department of Paediatric Medicine, PGMER, Chandigarh, and Dr. Jagdish Goyal, Head of Dept of Pediatric Pulmonary Medicine, AIIMS Jodhpur were the national resource persons for the workshop. Resource support was given by Dr. Manisha and Dr. Shashank from BD. Wet lab was organized by Dr. Snigda Singh and Dr. Manoj Khokhar from AIIMS Jodhpur.

6. 4th Egypt Workshop on cytometry was held on 3-5th of December at Al Azhar University. Local organisation was done by Dr Reham Hammad with all her team.

The workshop gathered 65 biologists from faculties of Medicine, Science and Pharmacy, coming from Al-Azhar, Assiut, Sohag, Aswan, Al-Mansoura, National liver Institute, Menoufia University, Ain-Shams, Alexandria, Cairo, National cancer Institute of Cairo, Zagazig and Tanta Universities from different parts of Egypt. Most people were mainly beginners in the field of Flowcytometry. The event was sponsored by Sysmex™ and BM Egypt companies. The workshop was under the active support from the vice president of Al-Azhar University and the Dean of faculty of medicine for Girls.

Post workshop evaluation show participant were very satisfied by the workshop. New teams active in cytometry in Egypt were actively represented (like Aim Sham University Mansour University). There were volunteer in participating to the initiative. There are also discussion on the need to expand the workshop due to the number of candidates to attend the training.

List planned activities in 2024 for this Term of Reference

- **Leipzig Flow cytometry IFCC/Fraunhofer IZI/ Beckman-Coulter course**
- **Winter school of Cytometry Autumn School Applications in Immunology possibly in October in Geneva university**
- **Egyptian Workshop at Al Azhar University, Pr Reham HAMMAD. Possible extension to a second session in spring/Fall**
- **IFCC ICCCLM Flow cytometry Symposium at IFCC ICCCLM (WorldLab) Congress, Dubai, UAE, May 2024.**
- **Maghreb certificate on cytometry** in diagnosis and research (CytoMagh) under umbrella of IFCC & Centre Mohammed VI de la Recherche et de l'Innovation under organization (Dr Fouad SEGHROUCHNI, in Rabat Morocco)



- **Indian Workshop on Flow cytometry** – monitoring of Immunodeficiencies and immunopathologies IFCC in collaboration with India Institute of Medical Sciences, Jodhpur, Pr.Mithu BANERJEE; Possible expansion to another site in India.
- **Tunisian Workshop on Flow cytometry:** diagnosis and research (Pr Mohamed HACHANA) planned in February 2024
- **Algerian Workshop on Flow cytometry** Diagnosis and research (Pr Azzedine TAHIAT), in collaboration with Algerian Society of Immunology planned in arch 2024
- **Possible workshop in Moldavia, South Africa, Latin America**

Term of reference 3

List 2023 accomplishments for this Term of Reference

List planned activities in 2024 for this Term of Reference

Term of reference 4

List 2023 accomplishments for this Term of Reference

List planned activities in 2024 for this Term of Reference

ADDITIONAL INFORMATION

New in 2024 :

Possible extension of Egyptian and Indian Workshop.

New sites of interest in Tunisia, and Algeria

Still under consideration : Flow Cytometry School in Latin America

Other plans

- **Extend training activities**
- **Renewal of the working group members**

2023 MEETINGS / CONFERENCE CALLS HELD (VIRTUAL & IN PERSON)

Several tel conferences for preparation of each workshop

Bogota with Beckman Coulter Marketing teams in Europe and Latin America

Claude Lambert France present

Maria Eugenia Schroeder Uruguay present

Cecilia Rodriguez Argentina not invited by BC

Ulrich Sack Germany excused

India, starting with a meeting in **Roma 2023 – Wordlab-Euromedlab 21-25 of may**

Preparation of the workshops in Egypt, India

MEETING SCHEDULE IN 2023

FCM-WG meeting in Roma 2023 – Wordlab-Euromedlab 21-25 of may

Name	Country	
Claude Lambert	France	present
Matthias Schiemann	Germany	excused
Mesude yilmaz	Turkey	excused
Andreas Spittler	Austria	excused
Maria Eugenia Schroeder	Uruguay	present
Katherina Psarra	Greece	present
Cecilia Rodriguez	Argentina	excused
Evangelos Ntrivalas,	New York	excused
Ulrich Sack	Germany	excused



PUBLICATIONS/CONFERENCE PRESENTATIONS/WEBINARS

A new story for an old challenge: Would flow cytometry beat molecular biology in monitoring chimeric antigen receptor T cell pharmacokinetics?

Lambert C, Ntrivalas E, Sack U; flow cytometry working group of the international Federation of Clinical Chemistry (IFCC). *Cytometry A*. 2023 Jan;103(1):8-11. doi: 10.1002/cyto.a.24695. Epub 2022 Oct 18. PMID: 36196578 Free PMC article. No abstract available.


Monocytes subsets altered distribution and dysregulated plasma hsa-miR-21-5p and hsa-miR-155-5p in HCV-linked liver cirrhosis progression to hepatocellular carcinoma.

ammad R, Eldosoky MA, Elmadbouly AA, Aglan RB, AbdelHamid SG, Zaky S, Ali E, Abd El Hakam FE, Mosaad AM, Abdelmageed NA, Kotb FM, Kotb HG, Hady AA, Abo-Elkheir OI, Kujumdshiev S, **Sack U, Lambert C**, Hamdy NM. *J Cancer Res Clin Oncol*. 2023 Nov;149(17):15349-15364. doi: 10.1007/s00432-023-05313-w. Epub 2023 Aug 28

Visiting Lecturer Programme (IFCC-VLP)

Chair: Sedef Yenice (TR)

See below table for 2023 organized VLP



IFCC- Abbott Visiting Lecturer Programme				
Applications approved for 2023				
Period	Location	Date of approval	Applicant	
09-10 MARCH	Islamabad, PAKISTAN	22 Dec 2022	Aysha Habib Khan	
16-18 MARCH	Marakech, MOROCCO	22 Dec 2022	Chabraoui Layachi	
24-26 MARCH	Puerto Vallarta, MEXICO	22 Dec 2022	Olga Deli Vázquez	
26-28 APRIL	La Libertad (Trujillo) - PERU	canceled	Luis Edgardo Figueroa Montes	
4-6 MAY	Djerba, TUNISIA	14 Dec 2022	Manel Chaâbane	
11-13 MAY	Montevideo, URUGUAY	13 Jan 2023	Stella Raymondo	
14-15 JULY	Kandy, SRI LANKA	12 April 2023	Dulani Jayawardena	
25-26 AUGUST	Ramallah, PALESTINE	17 July 2023	Osama Najjar	



**IFCC- Abbott Visiting Lecturer Programme
Applications approved for 2023**

Speaker/s	Lectures/workshops
Adil I. Khan (CA)	<ul style="list-style-type: none"> A. Best Practices in POCT inside and outside the hospital settings. B. Workshop on setting up POCT program
Bernard Gouget (FR) Alexander Haliassos (GR) Christophe Burucoa (FR)	<ul style="list-style-type: none"> A. Edu Workshop: Decarbonizing the healthcare and laboratory medicine sector. B. Artificial Intelligence in Digital Health: Issues and Ethical Concerns <ul style="list-style-type: none"> A. Edu Workshop: Decarbonizing the healthcare and laboratory medicine sector. B. Artificial Intelligence in Digital Health: Issues and Ethical Concerns <ul style="list-style-type: none"> A. National Reference Centers (CNR) versus Reference Medical Biology Laboratories (LBMR) B. Antibiotic resistance: how to detect the Carbapenemases?
Dr. Leverton Ortiz Cáceres (CH)	<ul style="list-style-type: none"> A. Strengthening - Standardization - Robustness of the Preanalytical Process B. Evaluation of the behavior of the pre-analytical process: Standardization of Indicators in the Associated Sub-Processes
Prof. Michael Neumaier (DE)	<ul style="list-style-type: none"> A. artificial intelligence and big data management for integrative diagnostics B. molecular diagnostics in plasma for therapeutic decision-making in personalized oncology
Prof Tomris Ozben (TR)	<ul style="list-style-type: none"> A. Implementation of sustainable practices in medical laboratories: switching clinical laboratories to green labs B. Integrated diagnosis: evidence based therapy guidance in oncology. From tumors markers to liquid biopsy in the current and future clinical practice
Koshrow Adeli: (CA) Tomris Ozben (TR) Carlos Von Mülhen	<ul style="list-style-type: none"> A. Harmonization in Laboratory Medicine: Application of Big Data Analytics (Opening Plenary conference. 50 min) B. Pediatric seroprevalence studies of Covid 19 and diagnosis/monitoring of multi-system inflammatory síndrome (MIS C) in children.(Symposium, 30 min.) <ul style="list-style-type: none"> A. Implementation of sustainable practices in medical laboratories.Switching Clinical Laboratories to Green Labs (Closing Plenary Conference, 50 min). B. Integrated Diagnosis:Evidence Based Therapy Guidance In Oncology. From Tumor Markers to Liquid Biopsy in the Current and Future Clinical Practice. (Symposium ,30 min) <ul style="list-style-type: none"> A. International consensus of ANA: how to interpret findings in the lab and for the clinician. (Conference 50 min) B. Update on autoantibodies in idiopathic inflammatory myopathies. (Symposium 30 min.)
Toni Badrick (AU) Ken Sikaris (AU)	<ul style="list-style-type: none"> A. Quality Control; Current problems and future trends B. Performance specifications for Clinical Laboratory <ul style="list-style-type: none"> A. Data mining as a laboratory management tool B. Understanding the clinical importance of measurement uncertainty and analytical goals
Mario Plebani (IT) Christa Cobbaert (NL) Paolo Fortina (US)	<ul style="list-style-type: none"> A. P lenary lecture: Quality in clinical laboratories: an unfinished journey. B. P lenary lecture: Laboratory testing in acute kidney injury. C. W orkshop: Quality control and assessment of antigen immunoassays. <ul style="list-style-type: none"> A. P lenary lecture: On the way to Cardiovascular Precision Diagnostics: implications for Laboratory Specialists. B. P lenary lecture: Applications for the precision medicine era C. W orkshop: Test Evaluation: how to select medical tests that are fit-for-clinical-purpose. <ul style="list-style-type: none"> A. P lenary lecture: Cancer Biomarkers in the Post Genomic Era. B. P lenary lecture: Cancer Molecular Profiling Strategies for Clinical Effect. C. Workshop: Technologies for personalized medicine

IFCC- Abbott Visiting Lecturer Programme Applications approved for 2023				
Period	Location	Date of approval	Applicant	
27-30 SEPTEMBER	Herceg Novi, MONTENEGRO	27 Jan 2023	Tanja Antunović	
4-6 SEPTEMBER	Kuala Lumpur, MALAYSIA	22 June 2023	Raja Elina Raja	
13-16 SEPTEMBER	Kerala, INDIA	5 July 2023	Rajiv R Sinha	
4-6 OCTOBER	Teheran, IR	13 September 2023	Dr. Seyyed Mehdi Boutorabi	
5-7 OCTOBER	Mendoza, ARGENTINA	31 July 2023	Maria Cecilia Lopez	
11-13 OCTOBER	Quezon City, PHILIPPINES	28 June 2023	Paulo Enrico P. Belen	
12-15 OCTOBER	Antioquia, COLOMBIA	6 September 2023	Marlene Isabel Vélez De La Vega	



IFCC- Abbott Visiting Lecturer Programme
Applications approved for 2023

Speaker/s	Lectures/workshops
Koshrow Adeli: (CA) Maurizio Ferrari (IT) Sverre Sandberg (NO)	A. NutrientSensing Mechanisms via Taste Receptors: Key Role in Control of Fod Intake and Metabolism B. Closing the Gaps in adults and Pediatric Reference intervals: Global Initiatives A. Big data and aging B. RNA editing as a diagnostic test to diagnosis bipolar disorders A. How to use biological variation data to 1) set performance specifications 2) monitor patients 3) generate personal reference B. An overview on how to diagnose and monitor the different porphyrias
Prasenjit Mitra (IN) Mahesheema Ali (US) Merve Sibel Gungoren (TR)	A. Analytical Quality goal Specifications B. Artificial Intelligence in Laboratory Medicine A. Moving Averages: Impact of implementing patient-based quality control B. Strategic innovation in Laboratory Medicine A. Concept and framework of auto verification B. Digital transformation strategies in clinical laboratories
Sedef Yenice (TR) Tomris Ozben (TR) VIRTUAL PRESENTATIONS Pierre-Jean Lamy (FR) VIRTUAL PRESENTATIONS	A. The shifts that are transforming laboratory medicine - and what to do about them. B. Lecture - Use of data analytics for the clinical laboratory A. Implementation of sustainable practices in medical laboratories. Switching the Clinical Laboratories to Green Labs. B. Integrated diagnostics: evidence-based therapy guidance in oncology. from tumor markers to liquid biopsy. A. Lecture: "Revolutionizing Cancer Diagnosis and Treatment with Companion AI" B. Meeting with Indian Young scientists proposed title: Lab medicine at the crossroads of innovation , technology and humanity
Khosrow Adeli (CA) Kyioshi Ichihara (JP) Iqbal Parker	A. Reference Interval Harmonization: Harnessing the power of big data analytics to harmonize reference intervals across populations and analytical platforms B. Workshop: Method of reference interval (theory and practical) A. Reference interval in laboratory and anthropometrics markers B. Workshop: Method of reference interval (theory and practical) A. Attending the Student festival B. Genetic differences of people in dietary pathogenicity and Molecular pathways of nutrition
Patricia Esperon (UY) Eduardo Tizzano (ES)	A. Emerging molecular biomarkers in colon cáncer B. Molecular markers in acute lymphoblastic leukemias A. Advanced Therapies and Early Intervention in Spinal Muscular Atrophy: A Copernican Revolution for Rare Diseases B. Multidisciplinary Genetics in the Genomics era
Bernard Gouget (FR) Robert Christenson (US)	A. Keynote Speaker for Inspirational Message at the Opening Ceremonies of the 20th PCQACL Annual Convention lecture on the topic "Mobile Health" B. lecture on the topic "Mobile Health" A. Workshop of Laboratory Evidence Based Laboratory Medicine Part 1 B. Workshop of Laboratory Evidence Based Laboratory Medicine Part 2
Maria del Carmen Pasquel (PE) Carlos von Muhlen (US) Montserrat Blanes (PY)	A. ISO 15189 Documentation, policies, plans, processes, procedures and records. B. Accreditation of Clinical Laboratories in Latin America. A. Autoantibodies in systemic inflammatory rheumatic diseases: an update on the new and important B. Update on autoantibodies in idiopathic inflammatory myopathies. A. Hepatopathy in patients with dengue. B. workshop: Implementation of the Diagnosis of Hepatopathy in patients with dengue. Language of the lectures The language



**IFCC- Abbott Visiting Lecturer Programme
Applications approved for 2023**

Period	Location	Date of approval	Applicant	
25-28 OCTOBER	Cuenca, ECUADOR	18 October 2023	Eduardo Mayorga	
29 OCT - 1 NOV	Mugla, TURKIYE	21 June 2023	Diler Aslan	
21-24 NOVEMBER	Guatemala City, GUATEMALA	27 June 2023	Alba Marina Valdes de Garcia	



**IFCC- Abbott Visiting Lecturer Programme
Applications approved for 2023**

	Speaker/s	Lectures/workshops
	<p>B. Varela (UY)</p> <p>E.M. Arredondo (CL)</p>	<p>A. Quality assurance pre-analytical phase (pre-congress course Preanalytical)</p> <p>B. Delta check: an analytical approach</p> <p>C. WG-PRE-LATAM Meeting</p> <p>A. Drogas de Abuso en los controles laborales. Requisitos de calidad y seguridad de las pruebas de DA. Factores preanalíticos.</p> <p>B. Gestión de los procesos preanalíticos según los requisitos de la Norma 15189-2022</p>
	<p>Qing Meng (US)</p> <p>Mario Plebani (IT)</p>	<p>A. Current Advances in Clinical Application of Tumor Biomarkers: Utility Challenge, and Perspective</p> <p>B. Carrier Development For Young Scientist In Clinical Biochemistry And Laboratory Medicine in Young Investigator Roadmap</p> <p>A. Integrated Diagnostics: The Future Of Laboratory Medicine</p> <p>B. Harmonizing The Post-Analytical Phase</p>
	<p>Carmen Alaez Verson</p> <p>José Ramiro Cruz</p> <p>Israel Parra Ortega</p>	<p>A. Genomics in Rare Diseases</p> <p>B. Application of NGS in the diagnosis of cancer</p> <p>C. Biomarkers of cancer</p> <p>A. Inaugural Lecture</p> <p>B. Blood Bank Forum</p> <p>C. Forum Professional Experiences Abroad</p> <p>A. Laboratory tests for patient care in the SARS CoV-2 pandemic, experience in a pediatric center.</p> <p>B. The laboratory as support in the transplantation of Hematopoietic Progenitor Cells</p>



COMMUNICATIONS AND PUBLICATIONS DIVISION (CPD)

Communications and Publication Division (CPD EC)

Committee of Internet and Digital Communications (C-IDC)

Corporate member representative

Committee on Public Relations (C-PR)

eNewsletter Working Group (WG-IFCC eNews)

eJIFCC (electronic journal) Working Group (WG-eJIFCC)

Ibero-American Nomenclature and Translations Working Group (WG-IANT)

2. CHAIR & MEMBERSHIP/TERMS OF OFFICE

Communications and Publication Division-EC

Tahir Pillay – TP (ZA)	Chair	2 nd	2022 01 – 2024 12
Janos Kappelmayer – JK (HU)	Vice-chair Editor eJIFCC	2 nd	2021 01 – 2023 12
Eduardo Freggiaro – EF (AR)	Secretary/IDC	2 nd	2020 01 – 2023 12
Rajiv Erasmus - RE (ZA)	PR Coordinator	2 nd	2022 01 – 2024 12
Katherina Psarra - KP (GR)	Editor IFCC News	2 nd	2022 01 – 2024 12
Tricia Ravalico - TR (US)	Corp. Rep.	1 st	2021 01 – 2023 12

Corporate Representative, Communications and Publication Division

Tricia Ravalico (Abbott) served as the Corporate Representative for the CPD for 2 terms (6 years).

Effective January 2024, the position will now be held by Colleen Strain (Abbott) for a three year term.

3. TERMS OF REFERENCE

Term of reference 1

Carrying out public relations policy as it affects production of material to be used for enhancing the professional image of the IFCC

List 2023 accomplishments for this Term of Reference

(Tricia Ravalico) The 2023 UNIVANTS of Healthcare Excellence awards recognize key teams around the globe who are achieving measurably better healthcare. Through this IFCC partnership and with support from the IFCC eNEWS, amplification of recognized best practices were possible.

Commercial feedback was also provided to various function teams, including the CP-R committee related to campaign for elevating Lab Medicine. Tricia participated in the voting and led activities with the Task Force of Corporate Members to provide rules for unbiased commercial videos in 2024.

Other insights related to the industry voice were shared at board meeting updates related to conferences, brand considerations associated with the new IFCC website, and more.



List planned activities in 2024 for this Term of Reference

Colleen Strain is excited to support all needs of the CPD as the new industry representative. She has an active role with UNIVANTS and will continue to support the great collaboration between IFCC eNEWS and the award program. She will likely help enforce and support an industry perspective for Lab Week initiatives and other key programs across the CPD.

(via C-PR)

Live my Lab Project (2023)

Following the IFCC General conference in Brussels in October 2022, the C-PR and TF-YS agreed to collaborate in the Live my Lab project. The aim of this project is to show case the work of laboratory professionals and their environment and how this impacts on disease diagnosis and patient management.

Edition of 6 videos, initiative "Live my Lab" for IFCC Global Medicine Week (together with TF-YS) in 4 languages

1. Promotional video material from last year to incorporate date 4th week (23rd to 29th April 2023)
2. Edition of Podcasts - Book 70th anniversary (in 4 languages)

Interact with WebEdge services to televise IFCC WorldLab Dubai in 2024

Term of reference 2

The e-JIFCC and the publication process of the IFCC publications

List 2023 accomplishments for this Term of Reference

New providers are identified for the publication of the eNews and the eJIFCC as well as the website for the maintenance of the publications. Publication of the newsletter and journal continued unabated.

List planned activities in 2024 for this Term of Reference

The format of the eNews and eJIFCC are currently under review and these will appear in the new format.

Term of reference 3

Maintain the recognition of the IFCC and its activities by establishing and maintaining an IFCC world wide web site.

List 2023 accomplishments for this Term of Reference

A new provider was sourced for the website and was appointed. Also, the website has been modernized to be mobile responsive. The entire website was also migrated.

List planned activities in 2024 for this Term of Reference

Continual improvement of the website and development and testing of the reimbursement and communications portal.

Term of reference 4

The CPD is responsible for the continued production of the IFCC Handbook and the Annual Report

List 2023 accomplishments for this Term of Reference

Data for the revision of the IFCC Handbook and annual report was collected and compiled for production.

List planned activities in 2024 for this Term of Reference

Data collection and updating will continue.

Committee on Public Relations (C-PR), Chair: R- Erasmus (ZA)

Term of reference 1

Assist IFCC in improving its visibility to all laboratory professionals in their country of residence, their respective National Societies and Regional Federations where it applies

Global MedLab 2023

3 members of C-PR Committee were part of this 7 member GMLW committee which was led by IFCC President

Members of C-PR interacted with GMLW committee to develop the short and long videos advertising the Lab Professionals week in Munich as well as assisting with the development of posters. A booth commemorating the Lab Professionals Week was set up at the Munich conference with a TV screen that displayed and shared multiple videos and interviews with key officers of the IFCC

The following posts were used for promoting the GMLW 2023. These posts were in English and Spanish

- Posts schedule English version: <https://globalmedlabweek.org/post-en>
- Posts schedule Spanish version: <https://globalmedlabweek.org/post-es>

Both were in full versions (images and texts) for every day and were available from the week before, during the GMLW and the week after.

Term of reference 2

Assist IFCC in improving its visibility to all laboratory professionals in their country of residence, their respective National Societies and Regional Federations where it applies. Promote the field of Clinical Chemistry and Laboratory Medicine to the lay public, healthcare administrators and decision makers in their respective country of residence

Jan -May 2023

In June 2022, C-PR asked all member societies to appoint national champions who would promote the role of laboratory medicine and laboratory professionals who continue to make a critical impact on patient diagnosis, monitoring and outcomes as well as public health prevention programs. We had approximately a 60% response rate

C-PR Committee then asked all nominated champions to take part in the Live my Lab Campaign. This campaign was carried out in collaboration with TF YS and IDC /INT Committees. A competition was also organized to select the best video presentation. 47 videos depicting what lab professionals do were submitted of which the 10 best were selected. From this list C-PR



then selected the best 4. Translations were also carried out. Many of the videos submitted were from S America due to the hard work of our 2 CPR members from the S American continent. We also asked for podcasts to be submitted and we had more than 40 submissions. Certificates of appreciation and participation have been sent to all participating societies.. C-PR members were also issued certificates. C-PR members used more than 24 hours of their personal time in the last 3 months answering emails and evaluating the quality of videos and podcasts as well as engaging in multiple communications with the 2 companies that were involved in editing the videos and podcasts. The C-PR Committee learnt many valuable lessons and we will use this experience in charting our way forward and increasing the communication and feedback from the national champions.

Term of reference 3

- Identify key PR tools and make recommendations to the CPD, other divisions and/or EB
- Develop and update promotional materials, through the CPD, on the IFCC organization and activities, as well as the discipline of Clinical Chemistry and Laboratory Medicine for distribution worldwide.
- Act as a link for distribution of IFCC brochures and other promotion material to all laboratory professionals in their country of residence, National Societies, and Regional Federations where it applies.

Several videos from different societies were put on the IFCC Website. The links for these were made available on all social media on which IFCC is registered. The links are given below

[\(https://www.ifcc.org/ifcc-communications-publications-division-cpd/cpd-committees/happy-laboratory-professionals-week-2021/\)](https://www.ifcc.org/ifcc-communications-publications-division-cpd/cpd-committees/happy-laboratory-professionals-week-2021/).

A social media page was also created asking for societies to add their names

See links below:

Facebook: <https://fb.watch/4YYcmdew3W/>

Telegram: <https://t.me/ifclinchem/179>

Linkedin: https://www.linkedin.com/posts/ifcc_medical-laboratory-professionals-week-2021-activity-6789815152561790976-ubXs

Twitter: <https://twitter.com/IFClinChem/status/1384052486240018433?s=20>

Youtube: <https://youtu.be/9tNYWelqTao>

Committee of Internet and Digital Communications (C-IDC),

Chair: D. Topcu (TR)

Term of reference 1

Promote IFCC activities through the website, social networks, and any other digital platform, offering functional units a vehicle to distribute the information they produce.

List 2023 accomplishments for this Term of Reference

- IFCC news publication using new website
- IFCC Facebook page has 33,064 followers (previous: 31.200), IFCC Instagram has 1.961 followers (previous: 1635), LinkedIn has 7361 followers (previous: 5.825) and

Twitter has 3.728 (previous: 3.458). There was a substantial increase over the past year especially in LinkedIn.

- Survey related to new website was conducted.

List planned activities in 2024 for this Term of Reference

- User portal with a variety of roles will be launched to improve communication between IFCC functional units.
- Reporting of survey's results about the new website

Term of reference 2

Explore new communication technologies and any other innovative technology tools that could be used to promote IFCC goals.

List 2023 accomplishments for this Term of Reference

- Backend of new IFCC portal was completed by DIGIWEDO. Further development will continue during 2024.
- Several meetings with DIGIWEDO to conceptualize the reimbursement platform.

List planned activities in 2024 for this Term of Reference

- Completion and launch of the Online Reimbursement System for IFCC officers using the new website and portal access.
- IFCC portal close circle testing

Term of reference 3

Develop and maintain the IFCC App.

List 2023 accomplishments for this Term of Reference

- Web application option discussed with DIGIWEDO. Since the new website is fully mobile responsive the App is no longer required.

List planned activities in 2024 for this Term of Reference

- Find new opportunities and features (for example push notifications) which could run over the new mobile website. This term of reference should be rewritten.

Term of reference 4

Manage social media accounts to promote IFCC worldwide.

List 2023 accomplishments for this Term of Reference

- The number of followers has been increased in each social media platform indicating that the content provided is very useful and attractive.

List planned activities in 2024 for this Term of Reference

- Update of Social media policy
- Write a guideline about using social media in lab medicine (in collaboration with the TF on Ethics)



Term of reference 5

Develop and deploy new tools through the Internet to meet the needs of IFCC projects.

List 2023 accomplishments for this Term of Reference

- Thanks to the new contract with the IT company DIGIWEDO, new developments has been started this year.
- The new IFCC user's portal development has been started in 2023. This portal will work as a communication hub for the entire organization. This new tool will reduce the workload of the IFCC Office and will allow them to track activities of IFCC officers. This project is right now in beta testing phase.
- An Online Reimbursement Platform is under development in collaboration with the Treasure and the IFCC Office.

List planned activities in 2024 for this Term of Reference

- Deployment of the IFCC User Portal and the Online Reimbursement Platform. These tools will save enormous amounts of work from the Office.

Term of reference 6

Offer internet support and provide other digital tool services to all National Societies.

List 2023 accomplishments for this Term of Reference

- This support is always available for NS. However, no requests have been received.

List planned activities in 2024 for this Term of Reference

- Together with C-PR and the digital marketing company, the social media coordinator will connect with their counterparts from EFLM and COLABIOCLI (and others willing to join) to disseminate all information related to LABWEEK 2024. In this way, C-IDC will support national and regional societies, helping them promote the clinical laboratory.

Nader Rifai, EMD Chair

eJIFCC (electronic journal) Working Group (WG-eJIFCC),

Chair: J. Kappelmeyer (HU)



Term of reference 1

The chair of this WG is Editor-in-Chief of the eJournal. He/she is a member of the CPD Executive, and is responsible for the articles and material in each issue.

The journal is an educational and news vehicle intended for the individual members of the Full Member Societies.

List 2023 accomplishments for this Term of Reference

Approximately 160 submissions were received. We invested in the Editorial Manager programme. Rejection rate is 80-90%.

35 manuscripts were accepted in 2023

List planned activities in 2024 for this Term of Reference

In discussion with Elsevier to take over the publication of the journal. A decision on this will be made in 2024.

eJIFCC (electronic journal) Working Group (WG-eJIFCC)

Chair: J. Kappelmeyer (HU)

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List planned activities in 2024 for this Term of Reference

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Term of reference 1

Gather and disseminate information about the activities of the EB, SD and EMD and their Committees and Working Groups

List 2023 accomplishments for this Term of Reference

All the eNews issues publish the information sent by the committees, task forces, and working groups. The chairs receive an email reminding them to send the relevant information every month.

List planned activities in 2024 for this Term of Reference

The same procedure is to continue for 2024.

Term of reference 2

Publish news and information about the activities of IFCC Members and Corporate Members.

List 2023 accomplishments for this Term of Reference

All the eNews issues publish the information sent by the IFCC members and corporate members including Univants awards.

List planned activities in 2024 for this Term of Reference

The same procedure is to continue for 2024.

Term of reference 3

Provide early information about discussions taking place within the Division Committees in order that the topics of current concern, and future developments, are known to all those practicing in the field.

List 2023 accomplishments for this Term of Reference

All the eNews issues publish the information sent by Division Committees.

List planned activities in 2024 for this Term of Reference

The same procedure is to continue for 2024.

Term of reference 4

Publish a calendar of all IFCC congresses and meetings.

List 2023 accomplishments for this Term of Reference

All the eNews issues publish the calendar.

List planned activities in 2024 for this Term of Reference

The same procedure is to continue for 2024.

WG Ibero-American Nomenclature and Translations (WG-IANT)

Chair: R. Girardi (AR)



DIAGNÓSTICO
IN VITRO

List 2023 accomplishments for this Term of Reference

Term of reference 1

Organise and manage the Ibero-American corner on the web site

The update of RIA and DIV web pages continues with the cooperation of the office and of the web editor

Membership: new members are participating into the WG activities representing all Ibero American IFCC countries. The RIA section of IFCC website is continuously updated.

Social networks are working very well and allowed a significant increase visits in IFCC / RIA / DIV.

List planned activities in 2024 for this Term of Reference

List 2023 accomplishments for this Term of Reference

Term of reference 2

Editorial Board of the e-journal "Diagnostico in Vitro" (edited by Raul Girardi)

3 DIV issues were published in February, June and October 2022 both in PDF version and flip version,

DiV sections are:

Editorial, based on the content of the journal, or on a specific event.

News and Updates, on the scientific or professional activities of the scientific societies of the region.

Scientific Articles and News Research articles,

Letters to the Editor,

Young Scientists corner,

Radio Interview "El Microscopio".

The access to DiV is direct from IFCC and DIV website

The WG-IANT is constantly inviting readers to visit the magazine through emails and social networks.



List planned activities in 2024 for this Term of Reference

Objectives:

1. Continue the 3 annual publications.
2. Offer more scientific content

Activities related to DIV scientific publication:

- The publication schedule for the months of February, June and October will be met.

List 2023 accomplishments for this Term of Reference

Term of reference 3

Produce Spanish and Portuguese terminological documents, translations and educational documents

List planned activities in 2024 for this Term of Reference

Continue as for 2023

4. ADDITIONAL INFORMATION

Committee of Internet and Digital Communications – C-IDC

After a long search, an agreement was reached with DIGIWEDO, which is doing an excellent job and taking over tasks that had been left undone due to the lack of support from the previous IT company.

Thanks to the great IT support provided by DIGIWEDO the new website is online and many other new projects are being developed.

Corporate Representative, Communications and Publication Division

Tricia Ravalico wants to thank the IFCC CPD for 6 outstanding years of service. She steps down from the CPD, as her term is over, while also with excitement to serve of the IFCC EB.

Committee for Public relations

C-PR engaged in a number of activities during 2022 and several communications were sent out. This was achieved through the hard work of C-PR Committee members. As C-PR is a small committee it is recommended that there must be full participation by its members in C-PR activities. If this is not possible members must then be asked to step down.

C-PR would like to acknowledge the immense role of Ms Silvia Colli-Lanzi through whom many of these activities were promoted. She has played a key role in all the activities of C-PR and contributed in a very constructive manner to the achievements of C-PR in 2022. C-PR would also like to acknowledge Naranhaus in producing the 70th Anniversary video. Lastly the role of young scientists is acknowledged. Through them we have made great progress. Their role is also acknowledged in the translation of the podcasts

eNews working group

There was a change of the eNews format in 2023. It was designed by the new IT company in collaboration with IFCC DIGIWEDO.

5. 2023 MEETINGS / CONFERENCE CALLS HELD (VIRTUAL & IN PERSON)

CPD executive

May 2023- Euromedlab Rome

November 2023- Amsterdam

Committee of Internet and Digital Communications – C-IDC

- EUROMEDLAB / WORLDLAB Rome, May 21-25, 2023
- Several Zoom meetings with DIGIWEDO to develop user portal for IFCC Website.
- Continuous contact over WhatsApp Group for quick discussions

Corporate Representative, Communications and Publication Division

As the corporate representative for the CPD, Tricia attended all CPD meetings. There were no other meetings required, although where possible, she also attended board meetings (upon invites) from other working groups within or associated with the CPD.

Committee on Public Relations (C-PR)

January 2023 (virtual)

May, 2023 (face to face)

August, 2022 (virtual)

December 2022 (virtual)

eNews Working group

A meeting of the WG was scheduled during Euromedlab Rome 2023 on Monday 22nd May 2023. Only one person appeared.

6. MEETING SCHEDULE IN 2024

May 2024- Worldlab Dubai

August 2024- Amsterdam

October 2024-APFCB

Committee of Internet and Digital Communications – C-IDC

- WORLDLAB Dubai, May 2024
- Online meetings as required starting from February 2024
- Continuous contact over WhatsApp Group for quick discussions

Corporate Representative, Communications and Publication Division

These meetings will be held and hosted by the chair of the CPD.

Colleen Strain will be active and in attendance to support the IFCC CPD, and will also be attending bimonthly meetings with the IFCC TF-CMs.

eNews working Group

There is a meeting of the WG scheduled during Worldlab Dubai 2024

7. PUBLICATIONS/CONFERENCE PRESENTATIONS/WEBINARS

Symposium proposal from the IFCC Communications & Publications Division

Title: **Advocacy for the importance of laboratory medicine:educating the public and governments about the impact of laboratory medicine on patient care and outcome**

Chair : **Tahir Pillay**

- i. IFCC National Champions and their role in promoting the impact of laboratory medicine and professionals globally - Rajiv Erasmus (South Africa)
- ii. Leveraging emerging technologies to promote the impact of laboratory medicine on patient care and diagnostics – Eduardo Freggiaro (Argentina)
- iii. Using Artificial Intelligence to promote the impact of Laboratory Medicine – Tahir Pillay (South Africa)
- iv. Using the COVID 19 pandemic and other pandemics to acknowledge the role of laboratory medicine and laboratory professionals in patient care -Khosrow Adeli (Canada)

Key UNIVANT publications from 2023 include:

1. Christina D Mack, Michael H Merson, Leroy Sims, Lisa L Maragakis, Rachel Davis, Caroline G Tai, Peter Meisel, Yonatan H Grad, David D Ho, Deverick J Anderson, Chris LeMay, John DiFiori, The “Bubble”: What Can Be Learned from the National Basketball Association (NBA)’s 2019–20 Season Restart in Orlando during the COVID-19 Pandemic, *The Journal of Applied Laboratory Medicine*, Volume 8, Issue 6, November 2023, Pages 1017–1027, <https://doi.org/10.1093/jalm/jfad073>
2. Robert H Christenson, In the Bubble and on the Ball, *The Journal of Applied Laboratory Medicine*, Volume 8, Issue 6, November 2023, Pages 1009–1012, <https://doi.org/10.1093/jalm/jfad074>
3. Paul L Epner, Laboratorians’ Opportunities to Improve Diagnosis, *The Journal of Applied Laboratory Medicine*, Volume 8, Issue 6, November 2023, Pages 1199–1202, <https://doi.org/10.1093/jalm/jfad076>

Representative eNEWS articles:

- Opportunity to learn from Top Leaders in Healthcare: Join the Executive Leadership Exchange
- Getting to zero harm in controlled substance prescribing: Increasing the accuracy of prescription compliance monitoring through enhanced drug testing support
- Improving the Peri-Operative Pathway of People with Diabetes Undergoing Elective Surgery: The IP3D Project
- Program ROSE (Removing Obstacles to cervical ScrEening)- empowering women to eliminate cervical cancer
- Safe and Informed Population Health Management: The National Basketball Associations COVID-19 Bubble
- Join the inaugural UNI5K walk/run in celebration of laboratory medicine



Conference: “AI applications in the Clinical Lab”, Uruguayan Congress of Clinical Biochemistry. Montevideo (Uruguay), May 11-13, 2023 (Eduardo Freggiaro)

ADDITIONAL INFORMATION

eNews working group

The IFCC eNews WG is working effectively due to the contributions of all the IFCC members, the editing by the chair and the Silvia’s Colli Lanzi hard work, as well as the DIGIWEDO work.

Committee of Internet and Digital Communications – C-IDC

Each member participated according to their possibilities. Some members could not attend in-person meetings due to work-related issues. This is understandable since it is volunteer work. However, this did not cut off the group's communication, which remained active through different digital means at all times. If this lack of attendance continue, some members could be invited to resign in order to give place to new members.

eNews working group

The members contribute by sending information from their countries. They don’t usually attend the meetings (virtual or in person) because it is probably difficult for them to attend ((financial reasons). Perhaps it is the correct way to work as members by sending information to the eNews.

With the expansion of more committees and divisions, administrative support has been constrained when compared to previous years. It may become necessary to increase the numbers of administrative staff to effectively cover the divisions and functional groups and enable divisions to complete tasks expeditiously.

Committee of Internet and Digital Communications – C-IDC

The main support we received was the hiring of the new IT company. We are a committee that generates ideas and those ideas are transformed into products, but without a good technology company this is not possible. EB, specifically the President and the Treasure gave an excellent support to the committee.

Committee on Public Relations (C-PR)

As this is an important committee it is suggested that we have quarterly meetings with EB to constantly review progress and share ideas to improve the desired functions and objectives

eNews working group

Perhaps the EB could ask from all IFCC member countries to send regularly information about their activities to the eNews. It is true that there is enough (or more than enough) content for every issue.

Tahir Pillay CPD Chair

EMERGING TECHNOLOGIES DIVISION (ETD)

Below, a summary of the accomplishments of ETD functional units and programs is provided:

EMD Executive Committee Membership:

S. Bernardini	Chair	IT	2 nd	2021 01 - 2023 12
R. Greaves	Secretary	AU	2 nd	2021 01 - 2023 12
P. Fortina	Member	IT	2 nd	2021 01 - 2023 12
D. Gruson	Member	BE	2 nd	2021 01 - 2023 12
Y. Liu	Corporate Member	CN	1 st	2021 01 - 2025 12
M. Roessler	Corporate Member	CH	2 nd	2021 01 - 2023 12
M. Ferrari	Consultant	IT		
L. Kricka	Consultant	US		
H. Martin	Consultant	AU		
J. Park	Consultant	US		



Committee - Emerging Technologies in Pediatric Laboratory Medicine (C-ETPLM), Chair: T. Lang (UK)

Term of reference 1

To identify, prioritise and coordinate projects to support the emerging science in pediatric laboratory medicine across the total testing process.

List 2023 accomplishments for this Term of Reference

Review of activities

Continuing to review activities of group with plan to assign roles to each committee member in areas and develop short, mid and long term plans:

New technologies

New clinical applications

Guideline documents

Education

Draft manuscript submitted entitled “: Considerations for Applying Emerging Technologies in Paediatric

Laboratory Medicine” for CCLM-ETD special issue.

List planned activities in 2024 for this Term of Reference

Continuing to review activities of group with plan to assign roles to each new committee members in areas and develop short, mid and long term plans with support from consultants.

Term of reference 2

To review the current concepts in Pediatric Laboratory Medicine and advance laboratory practice through the development and dissemination of position papers and guidelines

List 2023 accomplishments for this Term of Reference

Preparation of simple guidelines/recommendations covering a number of common topics (from the clinical/analytical list) in partnership covering developed and developing country perspective. Lead from committee (TPL) has developed plan to present at IFCC TownHall event

List planned activities in 2024 for this Term of Reference

IFCC Clinical Practice Guidelines preparation (topics and leads identified)

- Paediatric laboratory management (further subtopics: sample reception/ management, QC, delta check, auto-verification) - Tze Ping
- Sweat test – Ronda with collaboration with RCPAQAP inborn errors advisory group
- Reference intervals - Chloe, possible link with IFCC C-RIDL
- Genetics - Lianna, possible link with IFCC WG-Genomics or other relevant groups with paediatric focus
- IEM - Tim, possible link with IFCC WG-NBS/ SSIEM/ ISNS (contacts made, awaiting feedback – MetBioNet guidelines are a good example to develop)
- Steroid hormone testing – Stefan Wudy (corr member, Germany) and Michaela Hartmann (Germany) kindly agreed to write a guidance document with a working title “Paediatric Steroid Hormone Diagnostics”.
- POCT in paediatric laboratory medicine – Ioannis. Sharon has mentioned she'd be happy to help possible link with IFCC POCT group
- LC-MSMS – TPL engaged US LabCorp MS director who agreed to produce guidance documents in this area

Term of reference 3

To develop existing links and establish new links with clinical and scientific societies working in other specialist organizations including neonatology, pediatrics, inherited metabolic diseases and other rare diseases.

List 2023 accomplishments for this Term of Reference

Joint symposium with International Society for Neonatal Screening on Neonatal Screening at ICPLM in Rome.

Chair invited via KA to be representative on group reviewing standard or recommendation for publications that

present neonatal lab values for International Neonatal Consortium (part of the Critical Path Institute)

Chair (representing ACB) and Liaison member on WG-Neonatal Bilirubin

Initial discussion had with the IFCC- Committee on Clinical Application of Cardiac Biomarkers to increase the

knowledge and utility of cardiac troponins in children. One meeting held.

Initial discussion with Patient-Centric Sampling Interest Group) about sampling in the paediatric discipline and

suggested to them an initial meeting with some representation from laboratory medicine. Zoom meeting held

with KA, Tim McDonald and interested parties to discuss synergy.

List planned activities in 2024 for this Term of Reference

To be developed



Term of reference 4

To lead education activities, including the satellite meeting of WorldLab Congress of Pediatric Laboratory Medicine.

List 2023 accomplishments for this Term of Reference

XVIth ICPLM in Rome



PROGRAM 20 May 2023	
09:00	CLOSING CEREMONY
09:15	Introduction of Congress and opening by Chair and IFCC President T. Lang, K. Adali
09:15	PLENARY 1
10:00	Effects of COVID in the Italian Child C. Caffarelli
	SYMPOSIUM 1
	Neonatal Screening
	Chair: J. Buitkan, E. Greaves
10:00	Neonatal Screening, where are we now and where are we going? P. Schwab
10:30	Getting the most from metabolite and enzyme assays in newborn screening G. La Marca
11:00	The early recognition of rare disorders - artificial intelligence and genomic sequencing A. Ferris
	SYMPOSIUM 2
	Biomarkers in renal and cardiac disease
	Chair: T. Lang, Tei Ping Loh
11:30	Clinical Applications of Cardiac Markers in Pediatrics K. Adali
12:00	Biomarkers of cardiac toxicity and/or renal toxicity in pediatric patients with hematologic malignancies and cancer I. Papadimitriou
12:30	Markers in Renal Disease P. Maruffo
13:00	Lunch ☒

PROGRAM 20 May 2023	
	SYMPOSIUM 3
	Use of algorithms in pediatric diagnostics
	Chair: T. de Rijke, L. Synalopoulos
14:00	Current approaches to pediatric reference intervals using real world data J. Zlot
14:30	Neonatal early smart assays at the crossroad M. Stocker
15:00	Diagnostic accuracy of blood tests in pediatric appendicitis D. Fakhren-Cobarr
15:30	Coffee break ☒
	PLENARY 2
16:00	Experience and expertise in setting up and running a gas chromatograph mass spectrometry service for newborn screening in Vietnam Tran Thi Chi Mai
16:45	CLOSING CEREMONY
17:00	

Preparation of Webinar proposal for IFCC Webinar on Emerging Technologies in Pediatric Laboratory Medicine given on 25/10/23 Scientific session at AACC 2023 meeting in Anaheim focusing on Genomic testing and the complexity of introducing emerging technologies in Pediatric laboratory medicine

List planned activities in 2024 for this Term of Reference

XVIIth ICPLM in Dubai. Programme and speakers confirmed.

Identify missing topics etc in learning lab and EFLM academy and propose solutions

2 proposals submitted for 2024 ADLM meeting in Chicago.

Webinar proposal to be developed for IFCC series

Support YS-TF at next Forum with planning of pediatric focused session scientific session proposal at AACC meeting: Genomic Testing and the Complexity of Introducing Emerging Technologies in Laboratory Medicine

ADDITIONAL INFORMATION

In the meetings the link of activities to EB aims for 2023 were always discussed.

2023 MEETINGS / CONFERENCE CALLS HELD (VIRTUAL AND IN PERSON)

18/01/2023 Committee Meeting (Virtual)

16/02/2023 Committee Meeting (Virtual)

15/03/2023 Committee Meeting (Virtual)

20/04/2023 Committee Meeting (Virtual)

21/05/2023 Committee Meeting (In person, post ICPLM in Rome)

12/07/2023 Committee Meeting (Virtual)

Next meeting planned for 29/11/23 (virtual)



MEETING SCHEDULE IN 2024

TBC. Awaiting confirmation on new nominations and then will liaise with SCL to arrange dates and times for future meeting.

22/01/2024 Handover meeting between TL and LK (Virtual)

PUBLICATIONS/CONFERENCE PRESENTATIONS/WEBINARS

- Impact of COVID-19 on pediatric laboratory medicine: an IFCC C-ETPLM, SSIEM, ISNS global survey. Loh TP et al. eJIFCC Volume 33 no 2 – 2022
- Paper in prep RE:INC work - manuscript, entitled "Publication Recommendations to Report Laboratory. Data of Neonates – a Modified Delphi Approach", submitted to Pediatric Research.
- Webinar on ET in PLM in IFCC webinar series (25/10/23)
- Scientific session at AACC 2023 meeting in Anaheim on ET
- IFCC eNews article on Paediatric Biochemists reflections over 70 years
- ICPLM in Rome
- Draft manuscript submitted entitled "Considerations for Applying Emerging Technologies in Paediatric Laboratory Medicine" for CCLM-ETD special issue

IFCC-Committee on Mobile Health and Bioengineering in Lab Medicine (C-MHBLM), Chair J. Nichols (US)

TERMS OF REFERENCE

Advancing Digital Health and Harnessing Artificial Intelligence in Lab Medical Practice to improve clinical diagnosis The future of healthcare is here today. Artificial intelligence, data analytics, digital transformation, and cybersecurity are just a few of the emerging trends driving a new wave of healthcare innovations across the globe.

The realm of healthcare is undergoing a profound transformation through rapid technological advancements, particularly in the domains of Digital Health (mHealth) and Artificial Intelligence (AI). This transformative journey involves the integration of innovative technologies, such as smart devices and diagnostic algorithms, into both our daily lives and medical practices.

The C-MHBLM undertook a comprehensive analysis of the potential challenges posed by digital health technologies and formulating recommendations to effectively address them. Furthermore, the initiative aims to dismantle existing digital barriers to ensure seamless integration and utilization of digital health solutions. One pivotal focus area of our work involves the integration of Artificial Intelligence and Generative AI in clinical and laboratory settings for enhanced diagnosis and medical decision-making. Our investigations delved into operational AI solutions within clinical laboratories, emphasizing their incorporation into quality assurance frameworks. Our efforts aimed to create a synergy between human intelligence and machine capabilities.

By leveraging AI as a catalyst, we seek to foster sustainable development in healthcare practices. This entails a comprehensive exploration of the ethical considerations, training protocols, and collaborative frameworks necessary for the responsible implementation of AI in medical diagnostics. In summary, the C-MHBLM term of reference focused on navigating the evolving



landscape of Digital Health and harnessing the potential of Artificial Intelligence to revolutionize clinical and laboratory practices for the betterment of medical care and sustainable healthcare development. Patients expect more effective, personalized, and convenient services.

The C-MHBLM believes “generating genuine trust and transparency in AI algorithms is core to fostering the engagement of the healthcare community in the use of AI.

List 2023 accomplishments for this Term of Reference

1. The **C-MHBLM examined the AI terminology**, which is a fast-moving topic, and the same term can have multiple meanings.
 - A glossary was proposed, which should be viewed as a snapshot of contemporary definitions.
2. **AI presents a dual landscape** comprising challenges and opportunities, particularly in the pursuit of advancing secure generative AI models. The emergence of generative AI introduces novel dimensions to the realm of AI risk management, encompassing apprehensions about potential misuse, insufficient traceability, and the generation of undesirable outputs.
 - **Navigating this dynamic landscape**, the C-MHBLM attempted to identify emerging opportunities and extract value from generative AI in the field of laboratory medicine. This initiative signifies a dedicated commitment to navigating the complex terrain of AI implementation, while addressing considerations related to security, ethical principles, and fostering innovation.
 - **Central to the C-MHBLM's approach** is the emphasis on the pivotal role of enhanced collaboration among policymakers, industry stakeholders, and scientific organizations. The implementation of both established and innovative safeguards is deemed imperative for the development of secure systems, ensuring technical quality, consistency, and control which are critical elements for constructing a sustainable future.

List planned activities in 2024 for this Term of Reference

We propose to promote the current concepts of e-Health and m-health in laboratory medicine and establish collaborations and partnerships with other organizations and specialists in laboratory medicine through a mix of presentations, webinars, position papers, and possibly surveys, podcasts and other social media on a variety of possible topics:

- Use of AI in the laboratory such as delta checks, autoverification, commentind results (HLI interference comments), and clinical decision support to guide appropriate test utilization
- Regulation of AI and m-Health – addressing concerns such as security, privacy, phone apps and access to personal biometric and health data
- Big data – leveraging data mining, machine learning and pattern recognition algorithms
- New AI tools
- Future of mobile wearables with laboratory data to predict health and improve care
- Continuous glucose monitors – current outpatient applications and move to hospital care – liaison with IFCC CGM Workgroup

2023 MEETINGS / CONFERENCE CALLS HELD (VIRTUAL AND IN PERSON)

- Bi-monthly focused e-meetings Thanks to Zoom and Team
- Face-to-face meeting at EML WorldLab Roma
- Strategic meetings during congresses

MEETING SCHEDULE IN 2024

- Bi-monthly virtual meeting via Zoom
- Face-to-face meeting to be planned
- Strategic meetings during congresses (ADLM in Chicago)

PUBLICATIONS/CONFERENCE PRESENTATIONS/WEBINARS

PUBLICATIONS 2023

"Validation and verification framework and data integration of biosensors and in vitro diagnostic devices: a position statement of the IFCC Committee on Mobile Health and Bioengineering in Laboratory Medicine (C-MBHLM) and the IFCC Scientific Division." Accepted for publication in CCLM

Gouget Bernard, Dabla Pradeep Kumar, Sierra-Amor Rosa "Women social and health inequalities in the post-pandemic era" Laboratorijska Medicina, 1000 Ljubljana, Slovenia, accepted for publication September 2023

Gouget Bernard, Vaubourdolle Michel, Peoc'h Katell

"Anne Vassault, lauréate du prestigieux "IFCC-Robert Shaffer Award" for Outstanding Achievements in the Development of Standards for Use in Laboratory Medicine" 2023. Ann Biol Clin 2023; xx(x) : 1-3.

Gruson, Damien, Greaves, Ronda, Dabla, Pradeep, Bernardini, Sergio, Gouget Bernard and Öz, Tuğba Kemalöglu. "A new door to a different world: opportunities from the metaverse and the raise of meta- medical laboratories" Clinical Chemistry and Laboratory Medicine (CCLM), 2023. <https://doi.org/10.1515/cclm-2023-0108>

Nader Rifai, Traduit de l'anglais par Bernard Gouget, d'après l'article de Nader Rifai paru sur le site de l'American Association for Clinical Chemistry (AACC) <https://www.aacc.org/education/learning-lab>

Démocratisation de l'enseignement : les cours d'apprentissage adaptatif en biologie médicale et en médecine de laboratoire sont désormais disponibles sans abonnement ! Annales de Biologie Clinique. 2023;81(2):109-110. doi:10.1684/abc.2023.1792

Bouilloux Irving, Bouilloux Jean-Pierre, Giannoli Jean-Marc, Muller Hélène et Gouget Bernard Guide EFLM pour des laboratoires de biologie Médicale écoresponsables (traduction du guide EFLM Green), avril 2023 Private press

CONFERENCES AND CONGRESSES 2023

JIB Paris 2023 November 17-18 2023

B. Gouget , coordinator international sessions and Co-modérateur for the session: The Whys and hows of direct to consumer testing with Tomris Ozben, EFLM President and IFCC President elect B. Gouget, Chair session: Comment recourir à un LBMR ? (How to use a Reference lab?)

M. Germanos, B. Gouget: Co-chairs Arabic regional IFCC federation (AFCB): Primary health care centers in the Levant* and the role of clinical biology



LIII Mexican Federation of Clinical pathology (Federación Mexicana de Patología Clínica, A.C) November 1-4 2023: Prospectiva, posicionamiento y futuro del laboratorio clínico y la medicina de laboratorio; desde la visión de “una salud”

B. Gouget, speaker: Advancing healthcare equity through Lab Medicine, November 3rd 2023

Santé Publique France: Séminaire des CNR, 19 octobre 2023, Novotel Charenton le pont

B. Gouget, Fl. Doucet-Populaire, speakers : « CNR / LBMR : quelle(s) interface(s) et complémentarité(s) ? “CNR / LBMR: what interface(s) and complementarity(s)?

20th PCQACL (PH) Philippines Council for Quality Assurance in Clinical Laboratories), Oct 10-13 2023. B. Gouget, speaker: Keynote Lecture: Revolutionizing Healthcare: Exploring Mobile Health and eHealth , IFCC Visiting Lectureship

6^{èmes} Journées Francophones de Biologie Médicale, Antibes, 11 Octobre 2023 : « ISO 15189 version 2022 » : pour une meilleure approche patient par la gestion des risques » (“ISO 15189 version 2022”: for a better patient approach through risk management”), IFCC/EFLM session B. Gouget and D. Gruson, co-chairs delegated Anne Vassault to chair the session

49th ACBICON conference Kerala (IN) , symposium Session C-MHBLM:, Sep 13-16 2023, “Laboratory Medicine Path Ahead -Amalgamating Technology and Humanity” Faculty (National & International): Dr Bernard Gouget, Pr Pradeep Kumar Dabla, Pr Damien Gruson, Pr Sergio Bernardini B. Gouget, speaker: Unlocking the potential of Chat GPT: can it be our virtual assistant in Lab Medicine for better care?

Convention Nationale Cofrac ; Paris (FR), June 30th 2023 B. Gouget , conférence plénière: Le futur de la Santé et le défi de l’explicabilité (Plenary Lecture :The future of health and the challenge of explainability)

15th Annual Next Generation Summit, Washington DC August 21-23 2023

B. Gouget, speaker: “Trends in Mobile Health and digital technologies”
CMHBLM session chaired by James Nichols, C-MHBLM member

WorldLab-EuroMedLab Roma 2023 (IT), May 23

B. Gouget, C. Tsatsanis chairs, session on “Diagnostic challenges in Sepsis”

POCT: Home, Hospital and Beyond, Roma (IT)May 20-21 2023 B. Gouget, chair 3rd session on POCT and Quality assurance

23^{ème} Journées Marocaines de Biologie Clinique, Marrakech (MA) , Moroccan Society of Clinical Chemistry (SMCC) , March 16-18 2023 B. Gouget, speaker: Artificielle Intelligence et Challenges Ethiques,(Artificial Intelligence and Ethical Challenges), IFCC Visiting Lectureship B. Gouget, speaker: Laboratoires de Biologie Médicale de Référence (LBMR) vs Centre Nationaux de Référence (CNR), IFCC Visiting Lectureship B. Gouget, speaker: Construire une culture du développement durable en santé (Building a culture of sustainable health development), IFCC Visiting Lectureship

8^{eme} International conference of Chemical Pathology Department Chem Path 2023,

Alexandria (EG) February 19 2023: Lab medicine collaborating for better patient outcomes session 5: New perspectives in Lab Medicine (On-line)

Nader Rifai, speaker: The use of adaptative learning in lab medicine.

B. Gouget, speaker: Artificial Intelligence how is it changing laboratory Medicine

MedLab Middle East, Dubaï (UAE): February 6 2023

Session on Sustainability in the clinical laboratory

B. Gouget, speaker: Green medical labs: How to get started?

CONFERENCES AND CONGRESSES 2024

CONFERENCES AND CONGRESSES 2024

Precision Med Tri-Con, San Diego, CA (US) March 27, 2024: Advances in Mobile and Digital Technologies for Point-of-Care Diagnostics (in person)

James Nichols, speaker

IFCC NEWSLETTER 2023

DECEMBER 2023

- B.Gouget (VLP Abbott Manille): 20th PCQACL Convention-Manila (PH): the Filipino spirit of QAand Integrative AI at its Finest! p:11-16

NOVEMBER 2023

- B.Gouget: ACBICON 2023, Thiruvananthapuram: a vibrant scientific hub in South India p:5-9
- MAY 2023
- Abbott VLP:
- B.Gouget, A Haliassos: 23rd JMBC-SMCC Marrakech (MO) 2023 – an exciting interlude between Green Lab Medicine and the enchanting Majorelle Garden p:12-14 (revised version)
- B.Gouget, A.Haliassos: IFCC Abbott VLP at the 23th Moroccan Days of Clinical Biology, SMCC
- Marrakech – Artificial Intelligence and health: between performance and ethics pp:15-18
- B.Gouget, Idriss Lahlou Amine : IFCC Abbott VLP at the 23th Moroccan Days of Clinical Biology, SMCC Marrakech (MO) – National Reference Centers (CNR) for the fight against communicable diseases and Reference Medical Biology Laboratories (LBMR): exportable know- how? pp:19-23

APRIL 2023

- B.Gouget: IFCC C-MHBLM in the headlines p 7-10
- B.Gouget, A Haliassos: IFCC Abbott VLP 23 rd JMBC-SMCC Marrakech 2023 (MO), an exiting interlude between Green lab Medicine and the enchanting Majorelle Garden p:11-14
- B.Gouget, JM. Giannoli, F. Blanchecotte. JIB Paris 2022: Paving the way for sustainable strategies for medical labs p: 28-30

JAN-FEV 2023:

- B.Gouget, P.Dabla, D.Gruson, S.Bernardini. IFCC Abbott VLP Report, ACBICON 2022: Assessing AI technologies and ethics in healthcare services p 16-20
- B.Gouget, R.Assas Khalil, S.Bhargava. IFCC Abbott VLP Report, ACBICON 2022: It's time to look at the LabMed evidence! 21-23
- B.Gouget : Changing of the guard: Prof. Katell Peoc'h, SFBC President (Nov 2022 - Nov 2025) p 58-59
- B.Gouget, JM. Giannoli, F. Blanchecotte. JIB Paris 2022: an iconic congress in the iconic City of Lights p 60-65



- S.Stankovic and B.Gouget, JM Giannoli, F. Blanchecotte. Serbian response to a Western Balkan refugee crisis p 66-67
- Gramos Begoli and B.Gouget, JM Giannoli, F. Blanchecotte.. Kosovo – Spotlight on migrants and migration challenges 69-70
- M. Kaplan, B.Gouget, JM Giannoli, F. Blanchecotte.. Integrating lab medicine technologies and mobile health services for asylum seekers and refugees- Israel point of view p 71-73
- B.Gouget : Paris-Italy JIB 2022: Leading AI innovation in genomics p 74-75



Working Group on Artificial Intelligence in Genomic Diagnostics (WG-AIGD), Chair L. Kricka (US)

Term of reference 1

To evaluate and monitor emerging trends and directions of research and development in the field defined by the intersection of artificial intelligence, genomics, and clinical diagnosis.

List 2023 accomplishments for this Term of Reference

- We published on the WG-AIGD website a 2023 Current Awareness Update on the use of AI to classify Missense Variants.
- We published on the WG-AIGD website a 2023 Current Awareness Update on the development of Quantum Machine Learning (QML).

List planned activities in 2023 for this Term of Reference

We will continue to review emerging trends and determine if a Current Awareness Update is required.

Term of reference 2

To develop and in-depth assessment of the application of AI (deep learning, machine learning) in genomic (molecular) diagnostics.

List 2023 accomplishments for this Term of Reference

This term of reference is now outdated because of the continued rapid growth in the applications of AI in genomic diagnostics. A recent search for “(artificial intelligence OR machine learning) AND (genomic diagnostics)” produced 40,000 hits on Google Scholar. Such a large number of publications suggests that the area as a whole is transitioning beyond emerging, and accordingly, the WG has selected narrow areas within this larger subject area that we believe to be of interest to the IFCC community.

List planned activities in 2023 for this Term of Reference

A. None (see above for explanation)

Term of reference 3.

To develop periodic updates on the applications of AI in clinical genomic testing.

List 2023 accomplishments for this Term of Reference

A. We published on the WG-AIGD website a survey of AI-driven software platforms for genomic analysis and interpretation.

List planned activities in 2023 for this Term of Reference

A. We will continue to review developments in the applications of AI in clinical genomic testing and determine if they provide suitable topics for Current Awareness Updates on our website.

Term of reference 4

To access the accessibility and the barriers to routine implementation of AI in clinical genomic testing

List 2023 accomplishments for this Term of Reference

A. A review was published in CCA on best practices for AI in healthcare (Polevikov S. Advancing AI in healthcare: A comprehensive review of best practices, Clin Chim Acta 2023;548,117519).
B. The WG submitted a practice guideline proposal in response to the call for topics for “Best Practice Recommendations, Position Papers & Guidelines in Laboratory Medicine.” Decision pending.

List planned activities in 2023 for this Term of Reference

A. We will continue to monitor developments in the recommendations for AI-based diagnostic testing and determine if updates are required.

Term of reference 5

To develop a resource that will inform the IFCC community on developments and trends in the applications of artificial intelligence in clinical genomics

List 2023 accomplishments for this Term of Reference

A. ChatGPT has had a major impact in many areas. We published an article in IFCC eNews (Park JY, Fortina P, Kricka LJ. ChatGPT – timely tool or terrifying threat? (eNews, March 2023) and also used ChatGPT to provide textual content for the WG AIGD website. In addition a member of the WG published a mini-review on AI chatbots in clinical laboratory medicine (Yang HS, Wang F, Greenblatt MB, Huang SX, Zhang Y. AI Chatbots in Clinical Laboratory Medicine: Foundations and Trends, Clin Chem 2023;hvd106,



<https://doi.org/10.1093/clinchem/hvad106>), and a paper on the accuracy and clinical utility of ChatGPT (Munoz-Zuluaga C, Zhao Z, Wang F, Greenblatt MB, Yang HS. Assessing the accuracy and clinical utility of ChatGPT in laboratory medicine. Clin Chem 2023; 69(8): 939-40.

<https://doi.org/10.1093/clinchem/hvad058>).

B. A member of the WG (Prof McCudden) has agreed to contribute to IFCC TF-E AI webinar in 2024 –

Presentation topic: Healthcare Revolution: The Emerging Role of AI in Laboratory Medicine.

List planned activities in 2023 for this Term of Reference

A. IFCC TF-E AI webinar 2024 – Presentation topic: Healthcare Revolution: The Emerging Role of AI in Laboratory Medicine (Prof McCudden)

ADDITIONAL INFORMATION

A. We welcomed a new WG member in 2023: Dr He Sarina Yang (USA).

B. A redesign of the website was completed in 2023 by the IFCC Office staff. The new design consigns older updates to an archive in order to make the most recent updates more visible.

C. The WG is currently assessing the viability of developing a version of ChatGPT for medical research purposes.

D. A list of the 2023 publications by the WG was added as a footnote to the table of Membership on the web site in order to provide a perspective on the overall scope of the WG members activities in AI in laboratory medicine and broader aspects of medicine.

E. Dr H Sarina Yang has been proposed as the new Chair of the WG. The current chair wishes to remain a member for the second term of the WG. Outcome pending.

2023 MEETINGS / CONFERENCE CALLS HELD (VIRTUAL & IN PERSON)

A meeting of the WG-AIGD took place during the 2023 Conference in Rome in May 2023. The WG-AIGD has continued to operate mainly in a virtual mode via email, telephone and Zoom with individual members as required.

MEETING SCHEDULE IN 2023

No in person meetings are currently planned for 2024.

PUBLICATIONS/CONFERENCE PRESENTATIONS/WEBINARS

Publications

Greaves R, Kricka L, Gruson D, Ferrari M, Martin H, Loh TP, Bernardini S. Toolkit for emerging technology in laboratory medicine. Clin Chem Lab Med 2023;61:2102-14. DOI: 10.1515/cclm-2023-0571

Munoz-Zuluaga C, Zhao Z, Wang F, Greenblatt MB, Yang HS. Assessing the Accuracy and Clinical Utility of ChatGPT in Laboratory Medicine. Clin Chem 2023;69(8):939-40.

<https://doi.org/10.1093/clinchem/hvad058>).

Park JY, Fortina P, Kricka LJ. ChatGPT – timely tool or terrifying threat? IFCC eNews, March 2023.

Polevikov S. Advancing AI in healthcare: A comprehensive review of best practices. Clin Chim Acta 2023;548,117519.

Conference presentations

Webinars

Metabolomics Working Group (WG-M), Chair E. Fux (DE)

TERMS OF REFERENCE

Term of reference 1

Assess Metabolomics approaches and Identify barriers/ challenges for clinical applications.

1. To evaluate and monitor emerging trends of Research in the field of Metabolomics.
2. To provide an overview on metabolite discovery strategies by combining metabolomics with orthogonal experimental and computational biology approaches.
3. To assess the applications of Metabolomics in clinical diagnosis and prognosis.
4. To develop periodic updates of the applications on Metabolomics technologies and methods in clinical diagnosis.
5. To assess the accessibility and the barriers to routine implementation of Metabolomics in clinical laboratories.
6. To develop a resource that will inform the IFCC community on developments in the applications of Metabolomics in Clinical Diagnosis /Prognosis as well as methods/ technologies in the IVD Market.

List 2023 accomplishments for this Term of Reference

- Literature review of current applications of metabolomics in the clinical environment is an on-going task. Scouting activities will continue. Repository document to list the most interesting applications was created and is regularly being updated by the WG members
- Webinar on metabolomics given on February 15th 2023. Speakers were Drs Fux, Bendt and Otvos.
- Survey on global use of clinical metabolomics conducted in October & November 2023
- CCLM manuscript in preparation on results of the survey
- Abstract submitted for oral presentation at Worldlab in Dubai
- Abstract submitted for the french conference on metabolomics in toxicology

List planned activities in 2024 for this Term of Reference

- Publication in CCLM of manuscript on results of the survey
- Opinion paper from metabolomics WG
- Webinar planned in November 2024 with Marie Lenski and David Friedecký



Term of reference 2

Recommend solutions to facilitate the translation from academic laboratories to clinical laboratories

List 2023 accomplishments for this Term of Reference

1. Review of existing guidelines for metabolomics based technologies
2. Establish contact to existing quality assurance consortiums to start collaboration
 - Presentation and discussion with Mathew Lewis mQACC (metabolomics Quality Assurance & Quality Control) - <https://www.mqacc.org> on the 8th of march 2023. Closer interactions of metabolomics society and IFCC WG is desirable form both parts.

List planned activities in 2024 for this Term of Reference

- Define how the metabolomics WG can interact with mqacc

2023 MEETINGS / CONFERENCE CALLS HELD (VIRTUAL & IN PERSON)

11 JAN 2023, WED	1 – 2:30pm
31 JAN 2023, TUE	2 – 2:45pm
8 FEB 2023, WED	1 – 2:30pm
8 MAR 2023, WED	1 – 2:30pm
12 APR 2023, WED	1 – 2:30pm
14JUN 2023, WED	1 – 2:30pm
12 JUL 2023, WED	1 – 2:30pm
26 JUL 2023, WED	1 – 2pm Preparation of questions for IFCC survey
16 AUG 2023, WED	1 – 2:30pm
13 SEP 2023, WED	1 – 2:30pm
25 SEP 2023, MON	11am – 12pm Survey of application of clinical metabolomics
11 OCT 2023, WED	1 – 2:30pm
17 OCT 2023, TUE	2 – 2:30pm Last Changes for Survey
8 NOV 2023, WED	1 – 3pm
6 DEC 2023, WED	1 – 2:30pm
20 DEC 2023, WED	1 – 2:30pm

In Person Meeting on 24th of May at Worldlab in Rome attended by most members (Fux, Friedecky, Lenski, Otvos, Bendt, DiNatale)

MEETING SCHEDULE IN 2024

Monthly meeting + in person meeting in Dubai

PUBLICATIONS/CONFERENCE PRESENTATIONS/WEBINARS

IFCC Webinar in November

Oral presentation in Dubai - if accepted

Working Group on Method Evaluation Protocol (WG-MEP), Co-Chairs

R. Graves (AU) and TP Loh (SG)

TERM OF REFERENCE

1. To review and summarise the literature and guidelines on method evaluation procedures used in clinical laboratories.
2. To provide high-level guidance and incorporate evidence-based procedures for method evaluation, taking into account the intended clinical application of the measurement procedure.
3. To engage key stakeholders on method evaluation procedures, including and not limited to IFCC members and clinical stakeholders.
4. To develop and disseminate educational resources for clinical stakeholders, to inform best practices for method evaluation protocols.

Term of reference 1

List 2023 accomplishments for this Term of Reference 1

1. Completion of multi-journal publication of LEAP checklist to support appropriate information on method evaluation in medical laboratory journals

List planned activities in 2024 for this Term of Reference

1. Publish review of calibration practices and validation procedures for mass spectrometry in peer reviewed journal. (carried over from 2023)
2. Continue to review and summarise the method evaluation protocols

Term of reference 2

List 2023 accomplishments for this Term of Reference 2

- Publication of manuscripts as noted in TOR 1 and publication list

List planned activities in 2024 for this Term of Reference

- Work on implementing the LEAP checklist into journal guidelines. This is on the agenda for the CCLM editors meeting scheduled for March 2024 in Berlin.

Term of reference 3

List 2023 accomplishments for this Term of Reference

1. We recruited Professor Elvar Theodorsson to the working group to start the process of improved global representation

List planned activities in 2024 for this Term of Reference

1. To recruit a new member to the working group who has a high level of expertise from the North American Region



Term of reference 4

List 2023 accomplishments for this Term of Reference

- Successfully submitted workshop proposal to APFCB meeting for 2024.

List planned activities in 2024 for this Term of Reference

1. To submit a proposal for IFCC Webinar for 2024 - completed
2. To submit a symposium proposal for IFCC Euromedlab (Brussels) 2025
3. To explore regional/ national conferences for potential educational workshops/ seminars

ADDITIONAL INFORMATION

Publishers of American journals showed less enthusiasm for the LEAP checklist than did editors from other regions globally. This has raised some concern and after the November 2023 ETD-EC meeting, Prof Daniel Holmes was contacted to join and this invitation remains open.

2023 MEETINGS / CONFERENCE CALLS HELD (VIRTUAL AND IN PERSON)

- Monthly meetings held virtually

MEETING SCHEDULE IN 2024

- Monthly working meeting to continue
- To use Worldlab (Dubai) 2024 for in-person / hybrid discussion, and take the opportunity to meet corresponding members
- APFCB Congress (Sydney) method evaluation workshop to be presented in November 2024. We aim for a second in person / hybrid meeting discussion to be held at this congress.

PUBLICATIONS/CONFERENCE PRESENTATIONS/WEBINARS

Difference- and regression-based approaches for detection of bias.

Lim CY, Markus C, Greaves R, Loh TP; IFCC Working Group on Method Evaluation Protocols. Clin Biochem. 2023 Apr;114:86-94. doi: 10.1016/j.clinbiochem.2023.02.007. Epub 2023 Feb 21. PMID: 36822348

The LEAP checklist for laboratory evaluation and analytical performance characteristics reporting of clinical measurement procedures.

Loh TP, Cooke BR, Tran TCM, Markus C, Zakaria R, Ho CS, Theodorsson E, Greaves RF. Biochem Med (Zagreb). 2023 Oct 15;33(3):030505. doi: 10.11613/BM.2023.030505. PMID: 37841772 Free PMC article. Review.

The LEAP checklist for Laboratory Evaluation and Analytical Performance characteristics reporting of clinical measurement procedures.

Loh TP, Cooke BR, Tran TCM, Markus C, Zakaria R, Ho CS, Theodorsson E, Greaves RF; IFCC Working Group on Method Evaluation Protocols WG-MEP. Clin Chim Acta. 2023 Nov 1;551:117605. doi: 10.1016/j.cca.2023.117605. Epub 2023 Oct 15. PMID: 37844680

The LEAP checklist for Laboratory Evaluation and Analytical Performance Characteristics reporting of clinical measurement procedures.

Loh TP, Cooke BR, Tran TCM, Markus C, Zakaria R, Ho CS, Theodorsson E, Greaves RF. Scand J Clin Lab Invest. 2023 Nov;83(7):467-469. doi: 10.1080/00365513.2023.2261098. Epub 2023 Nov 30. PMID: 37838359

The LEAP checklist for laboratory evaluation and analytical performance characteristics reporting of clinical measurement procedures.

Loh TP, Cooke BR, Tran TCM, Markus C, Zakaria R, Ho CS, Theodorsson E, Greaves RF; IFCC Working Group on Method Evaluation Protocols (WG-MEP).

Clin Chem Lab Med. 2023 Oct 13. doi: 10.1515/cclm-2023-0933. Online ahead of print. PMID: 37838925

The LEAP checklist for laboratory evaluation and analytical performance characteristics reporting of clinical measurement procedures.

Loh TP, Cooke BR, Tran TCM, Markus C, Zakaria R, Ho CS, Theodorsson E, Greaves RF; IFCC Working Group on Method Evaluation Protocols (WG-MEP). Ann Clin Biochem. 2024 Jan;61(1):3-7. doi: 10.1177/00045632231206029. Epub 2023 Oct 15. PMID: 37838926

The LEAP Checklist for Laboratory Evaluation and Analytical Performance Characteristics Reporting of Clinical Measurement Procedures.

Loh TP, Cooke BR, Tran TCM, Markus C, Zakaria R, Ho CS, Theodorsson E, Greaves RF; IFCC Working Group on Method Evaluation Protocols (WG-MEP).

Ann Lab Med. 2024 Mar 1;44(2):122-125. doi: 10.3343/alm.2023.0342. Epub 2023 Oct 23. PMID: 37869780 Free PMC article.

The LEAP checklist for laboratory evaluation and analytical performance characteristics reporting of clinical measurement procedures.

Loh TP, Cooke BR, Tran MTC, Markus C, Zakaria R, Ho CS, Theodorsson E, Greaves RF; IFCC Working Group on Method Evaluation Protocols (WG-MEP).

Pathology. 2024 Feb;56(1):142-143. doi: 10.1016/j.pathol.2023.11.001. Epub 2023 Nov 27. PMID: 38065819 No abstract available.

IFCC Neonatal Bilirubin (WG-NB) in cooperation with the IFCC Scientific Division, Co-Chairs L. Mackay (AU) for SD, and R. Graves (AU) for ETD

TERMS OF REFERENCE

1. To understand the current status of agreement in neonatal bilirubin determination against clinical decision levels and EQA performance
2. To define appropriate performance parameters to ensure fitness for clinical purpose (screening, diagnosing or monitoring)
3. To review the availability and appropriateness of current JCTLM listed and other CRMs, RMPs and RMSs, define the appropriate measurand(s) and consider appropriate traceability chains
4. To periodically review emerging methodologies, their fitness for purpose and recommend solutions to improve comparability and traceability
5. To collaborate with major manufacturers (from both traditional and near-patient technologies) on neonatal jaundice testing to improve comparability and traceability (where appropriate)
6. To develop and disseminate publications and educational resources related to neonatal jaundice testing for stakeholders to support best practice





Term of reference 1

To understand the current status of agreement in neonatal bilirubin determination against clinical decision levels and EQA performance

List 2023 accomplishments for this Term of Reference

- The current status of bilirubin measurements has been reviewed against clinical decision levels in the publication the WG is about to submit for publication. The membership of the WG includes clinicians and EQA providers and this has resulted in excellent discussions on this topic.
- A Dutch consortium has been planning an “EQuiTaBILlty study” for bilirubin over 2023 and Miranda van Merkel has kept the WG up to date with progress. This will be a very important study assessing performance versus a commutable neonatal blood based material which will allow the best assessment of platform and lab performance to date.

List planned activities in 2024 for this Term of Reference

- Further review of international EQA schemes and the types of materials being employed and their commutability assessment
- Reporting to the entire member and corresponding member group on the outcomes of the Dutch “EQuiTaBILlty study” and discussion on implications for the WG-NB with respect to priority activities to follow on from this.
- Publish opinion paper

Term of reference 2

To define appropriate performance parameters to ensure fitness for clinical purpose (screening, diagnosing or monitoring)

List 2023 accomplishments for this Term of Reference

- Work on this TOR is still to commence.
- List planned activities in 2024 for this Term of Reference
- This TOR will not be covered until work looking at the evaluation of performance in the “EQuiTaBILlty study” is completed and the resulting implication on performance parameters considered.

Term of reference 3

To review the availability and appropriateness of current JCTLM listed and other CRMs, RMPs and RMSs, define the appropriate measurand(s) and consider appropriate traceability chains

List 2023 accomplishments for this Term of Reference

- Review of CRMs/RMPs, including non-JCTLM listed services, carried out and presented in the May 2023 face to face WG meeting.
- This review was also summarised and discussed in the current WG position paper.
- Issues with the two JCTLM listed RMPs have been flagged with JCTLM to attempt to update these entries.
- There are a large number of Chinese laboratories that are listed as RMS providers on JCTLM however these do not appear to be utilised outside of China.

- Currently, one of the main reference measurement providers is not JCTLM listed and is using a method that is not JCTLM listed and which is a “calibration-free” method. The appropriateness of this methodology is being considered by the WG and this is discussed in the WG position paper; as noted in TOR 1 update.

List planned activities in 2024 for this Term of Reference

- Work with JCTLM to update the current RMP entries for bilirubin, e.g. to add in measurement uncertainty and to assess the applicable ranges
- Work with NIST to ensure JCTLM listing of the new pure bilirubin calibrant SRM 916b
- Continue evaluation of the main non-JCTLM listed RMP that is being used by several manufacturers and EQA providers
- Continue consideration of the need for a mass spectrometry based RMP and consider mechanism for development

Term of reference 4

To periodically review emerging methodologies, their fitness for purpose and recommend solutions to improve comparability and traceability

List 2023 accomplishments for this Term of Reference

- Consideration of emerging technologies is flagged in the WG position paper, however currently the focus is on the laboratory-based methods and improvements that could be made in this area.

List planned activities in 2024 for this Term of Reference

- The focus on emerging technologies is likely to not commence until 2025.

Term of reference 5

To collaborate with major manufacturers (from both traditional and near-patient technologies) on neonatal jaundice testing to improve comparability and traceability (where appropriate)

List 2023 accomplishments for this Term of Reference

- Additional corporate corresponding members added during 2023 following calls for input, this has been successful in getting all relevant manufacturers on board.
- Industry forum video conference held on 25 September 2023 where all manufacturers were invited to present. The aim of the session was to better understand current methodologies used across manufacturers platforms and their calibration. Ten manufacturers participated and nine provided presentations. The VC also included presentations on: clinical importance, traceability and the EQA status including the planned EQuiTaBILlty study. Manufacturers were invited to ensure their platforms were covered in this study. The calibration approaches of each manufacturer were summarized in the meeting minutes with four having shifted
- to the new NIST SRM 916b calibrant and two using the reference laboratory that utilizes the “calibration-free” candidate RMP.

List planned activities in 2024 for this Term of Reference

- Review results from the Dutch EQuiTaBILlty study using neonatal blood with manufacturers.
- Continue to work with manufacturers on calibration approaches, including encouraging the move from NIST 916a to NIST 916b as the CRM

Term of reference 6

To develop and disseminate publications and educational resources related to neonatal jaundice testing for stakeholders to support best practice

List 2023 accomplishments for this Term of Reference

- WG position paper being finalised with planned submission in February/March 2024.

List planned activities in 2024 for this Term of Reference

- Publish WG position paper in July 2024 as part of the CCLM Special Issue
- Present symposium at 2024 APFCB in Sydney, Australia November



ADDITIONAL INFORMATION

During 2023 we collectively have worked to engage all relevant industry partners. The working group has been successful in engaging with twelve industry partners who have representatives as corresponding members, these are Abbott, Asahi Kasei, Autobio Diagnostics, Beckman Coulter, Inc., Maccura Biotechnology, QuidelOrtho, Radiometer, Roche, Siemens Healthineers, Snibe, Thermo Fisher Scientific, and Werfen

2023 MEETINGS / CONFERENCE CALLS HELD (VIRTUAL AND IN PERSON)

Eight video conferences of members held on:

24 January, 22 February, 20 March, 18 April, 10 July, 14 August, 18 September, 23 October

Half day face to face/hybrid meeting of members, corresponding members and corporate members held on 24 May

Industry forum videoconference of members, corresponding members and corporate members held on 25 September 2023

MEETING SCHEDULE IN 2024

VC held on 12 January 2024. Future bi-monthly VCs are planned for 2024.

Full day face to face / hybrid meeting planned for 28 May 2024.

PUBLICATIONS/CONFERENCE PRESENTATIONS/WEBINARS

WG position paper due to be submitted in February/March 2024.

Working Group on Single Cell and Spatial Transcriptomics (WG-SCST), Chair AP. South (US)

TERMS OF REFERENCE

Provide a regularly updated perspective on the clinical diagnostic applications of single-cell and spatial transcriptomic technologies as they evolve and become more accessible over the next 3 years through both the creation of a webpage and the publication of manuscripts to:

- Assist clinical laboratories in developing in-house single-cell and spatial transcriptomics
- Provide up to date information on potential therapy matches through identification of effector cell types in different disease states
- Provide up to date information on technologies and approaches as they become commercially available

Working Group on Guidance for the Implementation of Custom-made Genomic Panels (WG- CGP), Chair J. Morrissette (US)

3. TERMS OF REFERENCE

Provide a regularly updated perspective on the clinical diagnostic applications of NGS over the next 3 years through both the creation of a webpage and the publication of manuscripts to:

- assist clinical laboratories in developing in-house NGS programs,
- model ways to provide mutation detection,
- improve detection linked to therapies for those in emerging nations.

Working Group on Health Technologies Assessment (HTA) Core Model for Laboratory Medicine (WG-HTA), Chair D. D'Angela (IT)

TERMS OF REFERENCE

- Identify and collate relevant documents from national and supranational organizations devoted to HTA;
- Possible conduct survey to member societies to find how and where HTA is applied in their
- Countries;
- Make a Core HTA Model specific for Laboratory Medicine
- Develop a white paper about HTA
- Educational activities shared with Health Economists

*Sergio Bernardini, ETD Chair, Damien Gruson, ETD Chair-el
Ronda Greaves, ETD Secretary*

TASK FORCES

Task Force on Ethics (TF-E)

CHAIR & MEMBERSHIP/TERMS OF OFFICE

Name	Position	Country	Term	Time in Office
J. Wiencek	Chair	US	1 st	2024 01-2026 12
M. Zaninotto	Member	IT	1 st	2023 03-2025 12
SK Datta	Member	IN	2 nd	2023 01-2025 12
J. Verona	Member	AR	2 nd	2023 01-2025 12
A Amayo	Member	KE	1 st	2024 01-2026 12
N. Fink	Consultant	AR		
T. Ozben	EB Liaison	TR		



TERMS OF REFERENCE

Term of reference 1

To increase awareness and to provide a voice among Laboratory Medicine Professionals, including researchers, on ethical issues and to encourage the practice of Laboratory Medicine to the highest ethical standards

List 2023 accomplishments for this Term of Reference

- Promoted the 2021 IFCC Code of Ethics to guide IFCC Members in its adoption
- Launched the user-friendly Ethics “toolbox” available on the TF’s IFCC webpage
- Presented a webinar for the IFCC series on “Publication Ethics: An overview from different perspectives”
- Submitted a webinar proposal for the IFCC series on the “Artificial intelligence in the clinical laboratory. Implementation, bioethics and legislation.” planned for 2024
- Submitted a Proposal to the SiBioC on Teaching Ethics in Laboratory Medicine
- Worked with the National Congress SlibioC 2024 to review topics, speakers and provide suggestions to the development of a scientific session on ethics to be presented in Bologna 2024

List planned activities in 2024 for this Term of Reference

- Fill open full member position to task force
- Review corresponding, consultant and industry members for continuing interest
- Exploring partnerships with other IFCC Task Forces, Committees as well as National Societies (e.g., European Federation of Laboratory Medicine) to investigate ethical issues across various areas of laboratory medicine.
- Continue to identify foundational and emerging ethical issues impacting patient care globally, such as access to laboratory testing, artificial intelligence, and gene therapy
- Present webinar for the IFCC series on the “Artificial intelligence in the clinical laboratory. Implementation, bioethics and legislation.”
- Zaninotto to present at invited talk at National Congress SlibioC 2024 on Ethics topic
- Wiencek to present at invited talk at EFLM 2024 Strategic Conference on “Ethics in scientific research and publication” in the context of the session on “Ethical aspects in laboratory medicine”

- Develop and submit at least two webinar proposals for IFCC to consider such as Ethics of green lab practices, equity and access to lab testing, publication ethics part 2 and ethical issues of emerging technologies in mobile health.

Term of reference 2

To develop freely available guidance documents and articles for IFCC member societies on various ethical issues with a goal to publish through IFCC official publications

List 2023 accomplishments for this Term of Reference

- Published manuscript in Clinica Chimica Acta on “Ethical issues in the use of leftover samples and associated personal data obtained from diagnostic laboratories”
- Developed global lab medicine professional survey to determine ethical perspectives regarding patient’s immediate access to test results
- Developed ethical checklists for 1.) Clinical research studies 2.) Ethical conduct in laboratory medicine
- Compared the ISO 15189:2012 and ISO 15189:2022 on the basis of ethical requirements

List planned activities in 2024 for this Term of Reference

- Develop and submit manuscript for the ISO 15189:2012 and ISO 15189:2022 comparison on the basis of ethical requirements
- Develop and submit the manuscript “Checklists to evaluate the ethical conduct of researchers and laboratory medicine practitioners”
- Submit global lab medicine professional survey to determine ethical perspectives regarding patient’s immediate access to test results to executive board approval and then distribute to IFCC member societies.
- Develop and submit manuscript based on survey findings from above
- Monitor and upload IFCC current member societies that have their own code of ethics or those who have adopted the IFCC’s Code of Ethics to our TF website
- Reach out to Clinical Chemistry Editor to gauge interest in putting together a Question and Answer article together for “Ethical Issues of Artificial Intelligence in Lab Medicine”
- Develop a subgroup of full and corresponding members to begin planning discussions for an Evidence-Based Practice Guideline or Position Statement in Lab Medicine

2023 MEETINGS / CONFERENCE CALLS HELD (VIRTUAL & IN PERSON)

Virtual

Feb 1st 2023, April 27th 2023, July 11th 2023, August 1st 2023, November 20th 2023, December 11th 2023

Subgroup meeting for survey

August 29th 2023, October 5th 2023, October 16th, 2023

In person

Rome May 21nd 2023



MEETING SCHEDULE IN 2024

We plan to have six virtual meeting that invite all members in Feb, Apr, Jun, Aug, Oct, and Dec 2024 and one in person meeting in Padova Sept 2024.

In addition, the chair proposes that once a subgroup is established that they meet at a specified cadence, no less than once every two months.

PUBLICATIONS/CONFERENCE PRESENTATIONS/WEBINARS

- **Fink N, Datta SK.** IFCC National Societies' Code of Ethics: actual situation. IFCC e-news. 2023; May(5):10.
- Hart SA, **Wienczek JR.** The Ethical Dilemma of a Patient's Immediate Access to Test Results. Clin Chem. 2023;69(7):773-774.
- Hart SA, **Wienczek JR.** Government Mandates Immediate Access to Cancer Test Results: Patient Empowerment or Secondary Harm?. Clinical Chemistry 2024;70(1):353-54.
- **Verona J.** ChatGPT in scientific research. Editorial Note (ChatGPT en la investigación científica. Nota editorial. Article in Spanish) ByPC 2023;87(3).
- Remes Lenicov F, **Fink NE.** Ethical issues in the use of leftover samples and associated personal data obtained from diagnostic laboratories. Clin Chim Acta. 2023;548:117442.
- Webinar "Publication Ethics: An overview from different perspectives"

ADDITIONAL INFORMATION

- There has been good attendance at the virtual meetings and in person. Additional subgroup meetings were also established to refine one of our projects. There were a few listed corresponding, consultant and industry members noted on our email group that had not attended virtual or in person meetings. As a result, at the end of 2023, we requested replies to confirm interest from corresponding, consultant and industry members. Based on these replies, it was discussed that we will need to adjust our roster and 1.) invite top candidates that submitted to our call for full member nomination that was done in 2023 and 2.) invite nominations for industry representation
- The support of executive board and the IFCC Secretary staff is excellent.

Nilda Fink, TF-E Chair

Task Force for Young Scientists (TF-YS)

CHAIR & MEMBERSHIP/TERMS OF OFFICE

Name	Position	Country	Term	Time in Office
S. Fares Taie	Chair	AR	2 nd	2023 01 - 2025 12
C. Imperiali	Member	ES	2 nd	2023 01 - 2025 12
A. Rampul	Member	ZA	2 nd	2022 01 - 2024 12
S. Campbell	Member	US	1 st	2022 05 - 2024 12
U. Senarathne	Member	LK	1 st	2023 05 - 2025 12
M. Lenski	Member	FR	1 st	2023 05 - 2025 12

TERMS OF REFERENCE

Term of reference 1: TF-YS Educational Sessions & Networking

List 2023 accomplishments for this Term of Reference

1. COLABIOCLI YS Leadership Workshop. March to May 2023.



2. FNSIP-BM congress (French national federation of Young scientists in Laboratory medicine), 18 March 2023, Marie Lenski
3. Training Day for Mentors in Specialty Residency Training. Barcelona, Spain. 30th March, 2023
4. COLABIOCLI conversatorio «Los jóvenes profesionales del laboratorio clínico. Los desafíos dentro de COLABIOCLI». May 9th 2023
5. 36th National Days of Clinical Biology: «Young Scientists Symposium». May 11-13th, 2023, Djerba, Tunisia.
6. 25th WORLDLAB – EUROMEDLAB, ROME 2023. Second YS FORUM. 21st May 2023.
7. 25th WORLDLAB – EUROMEDLAB, ROME 2023. YS Symposium. Chairs: K. Taha Ucar (Turkey), B. Das (India)
 - a. Circulating cancer biomarkers: where are we now?, A. Tikhonov (Russia)
 - b. Immature platelet fraction as an early inflammatory biomarker, C. Imperiali (Spain)
 - c. Dialogue between lab and clinicians for a win-win collaboration, M. Lenski (France)
 - d. Setting Reference Intervals for analytes with dynamic physiological changes, U. Senarathne (Sri Lanka)

8. COLABIOCLI «2da Conferencia Latinoamericana de Jóvenes Profesionales del Laboratorio Clínico». Florianópolis, Brazil. June 18-21st, 2023
9. Corresponding members participating in this activity:
 - a. Sofía Duarte (Guatemala)
 - b. Jorge Hernandez Bello (Mexico)
 - c. Alvaro Justiniano Cortez (Bolivia)
10. Africa global MedLab. October, Johannesburg- Speaker: Ashlin Rampul
11. Cardiometabolic conference. Cape Town, November 9th 2023. Speaker: Ashlin Rampul



2da. Conferencia Latinoamericana de Jóvenes Profesionales del Laboratorio Clínico
Del 18 al 21 de Junio del 2023, Florianópolis, Brasil.








The poster lists the following speakers and topics:

- Dra. Ana Sofía Duarte Acosta** (Guatemala): Importancia de la Medicina del Laboratorio. Modelo del Comité Profesional del Laboratorio Clínico.
- Dra. María del Rosario Bonaspan** (Argentina): Calidad: Indicadores y su importancia como en el paciente.
- Dra. Eliana Almira Oyente** (Uruguay): Utilización de pruebas. Una mirada del este regional para América Latina.
- Dra. Citlali Lencastre Wain** (Mexico): Medicina Genómica en el Fero Nivel de Atención y su Impacto en Salud Pública.
- Dra. Rosana Rodríguez Figueroa** (Cuba): Biomarcadores de actividad del laboratorio.
- Dra. Natalia Serrano Guacanda** (Chile): Diagnóstico y prevención a nivel de la salud mental.
- Dra. Diana Estigarribia** (Paraguay): Análisis de biomarcadores proteómicos para el estudio de identificación, validación y estabilidad en el laboratorio clínico.
- Dra. Carlos Raúl Francisco Rodríguez** (Cuba): El laboratorio como herramienta clave en el diagnóstico de la enfermedad infecciosa.



List planned activities in 2024 for this Term of Reference

1. AFCC Congress 2024. IFCC YS-TF presentation (Ashlin Rampul). El Cairo, January 25-26th, 2024. (Programme attached in separate document)
2. XVI Congrés Català de Ciències de Laboratori Clínic (Claudia Imperiali). Barcelona, April 25-27th, 2024.
3. IFCC WORLDLAB YS FORUM 3rd edition. Joint activity with the AEU society. Dubai, May 25-26th, 2024.

4. TF-YS to the Community. YS will speak to the community in Dubai about different health topics in their original language. The idea of these talks is to target emigrants living in Dubai in their original language (70% of the population of Dubai are foreigners). Dubai, May 26-30th, 2024.
5. COLABIOCLI conference. YS symposium + Forum. Programme in progress. Cartagena (Colombia), October 3-6th, 2024.

Term of reference 2: WEBINAR SERIES

List 2023 accomplishments for this Term of Reference

Webinar 1: “Challenges of digital technologies and artificial intelligence in laboratory medicine” July 27th

Moderator: Sean Campbell and Marie Lenski

Speaker 1: Reinhardt Hesse - Augmenting Intelligence: Basics of Artificial Intelligence in the lab

Speaker 2: Jakob Adler - Skills of the Future - What kind of digital competence is needed?

IFCC Young Scientists Live Webinar on Challenges of digital technologies and artificial intelligence in laboratory medicine

Moderator Moderator Skills of the Future - What kind of digital competence is needed? Augmenting Intelligence: Basics of Artificial Intelligence in the lab Bioinformatic infrastructure, pipeline and impact in clinics

Dr. Marie Lenski [France]
Young specialist in toxicology
Lille University Hospital

Dr. Ashlin Rampul [South Africa]
Specialist Chemical Pathologist
PathCare

Dr. Jakob Adler [Germany]
Specialist in Laboratory Medicine
Medical Laboratory Prof. Schenk/
Dr. Ansoerg & Colleagues

Dr. Reinhardt Hesse [South Africa]
Chemical Pathologist
PathCare

Dr. Augustin Boudry [France]
Specialist in Bioinformatics
Lille University Hospital

Date: July 27, 2023
Time: 9 AM (Eastern Time), 3 PM (Central European), 9 PM (China Standard Time)

IFCC
International Federation of Clinical Chemistry
www.international-federation.org

Webinar 2: “Increasing visibility of Laboratory Medicine through scientific communication and social media”. December on the 18th to 19th

Moderator: Tara Rolic and Kamil Taha Ucar

Speaker 1: El-Khoury, Joe (USA)

Speaker 2: Julian Judit (France)

Speaker 3: Sibtain Ahmed (Pakistan)

IFCC Live Webinar on Increasing visibility of Laboratory Medicine through scientific communication and social media

Moderator Moderator Visualizing Lab Medicine: Instagram's Inspirations How to Use YouTube & X for Effective Science Communication Scroll Safely- Navigating through Social Media Ethically & Professionally

Dr. Kamil Taha Ucar [Türkiye]
Laboratory Specialist in Clinical Chemistry Istanbul Başakşehir Pine and Sakarya City Hospital

Mrs. Tara Rolic [Croatia]
European Specialist in Laboratory Medicine, University Hospital Centre Osijek

Mrs. Judit Julian [Spain]
Resident Clinical Chemistry The Hospital Clinic de Barcelona

Prof. Joe M. El-Khoury [USA]
Associate Professor of Laboratory Medicine
Yale University

Dr. Sibtain Ahmed [Pakistan]
Chemical Pathologist Aga Khan University Pathology & Laboratory Medicine, Section of Chemical Pathology, Karachi

Date: December 21st, 2023
Time: 9:00 AM (Eastern Daylight), 3:00 PM (Central European), 10:00 PM (China Standard)

IFCC
International Federation of Clinical Chemistry
www.international-federation.org

List planned activities in 2024 for this Term of Reference

Webinar 1: “Genomics, Proteomics, Metabolomics”. January 19th

IFCC Young Scientists Live Webinar on Omics in LM: Genomics, proteomics, metabolomics

Moderator

Dr. Aleksei Tikhonov [France]
Researcher in translational cancer immunotherapy and precision medicine
Laboratory of Translational Research in Immunotherapy (LRTI)

Genomics of mitochondrial diseases: current approaches for molecular diagnosis

Ms. Daniela Alejandra Pibernus [Argentina]
Biochemist
Pediatric Hospital "Prof. Dr. Juan P. Garrahan"

What can proteomics bring to the monogenic disease diagnostics table?

Dr. Ksenia Kuznetsova [Norway]
Postdoctoral fellow
Mohn Center for Diabetes Precision Medicine, Faculty of Medicine, Department of Clinical Sciences, University of Bergen

Lost in translation - a story of one clinical lipidomics project

Dr. Olya Vvedenskaya [Germany]
Scientific communications officer
Biotech Industry, Lipotype

Date: January 19, 2022
Time: 9 AM (Eastern Standard), 3 PM (Central European), 10 PM (Beijing)

IFCC

Webinar 2: “Practical applications of Statistics in Laboratory Medicine”. Date to be confirmed.

Moderators: Udara and Tamar

Webinar 3: “Critical Laboratory Results”. November

Moderators: Ashlin

Term of reference 3: LAB-SURFING

List 2023 accomplishments for this Term of Reference

Lab-Surfing is a Laboratory professional social media designed and created in order to fulfil the objectives of IFCC-TFYS & unattended needs of Young Scientists (YS) globally. In a continuing evolving Laboratory Medicine profession with new technologies and methods every year, YS find exchange programmes and communication essential to widen their horizons and sharpen the laboratory skills.

Required an update on IT and google certificates. Licences and maintenance are well organized. More than 800 YS registered from all around the world.

List planned activities in 2024 for this Term of Reference

Continue working with the platform that is being used successfully by YS from all around the world.

Newsletters to improve the communication among users.

Required an update on IT and google certificates.

Licences and maintenance is required in a yearly basis.

Term of reference 4: CAPILLARY PROGRAMME

List 2023 accomplishments for this Term of Reference

This programme intends to increase the participation of TFYS corresponding members during national meetings.

A Survey was conducted of corresponding members, and National YS-WGs have been mapped. Two zoom meeting were conducted with the corresponding members. All the information of the TF-YS was shared with them, also power points to communicate the activities in their own national society groups. During the meetings we did a brainstorming to create new projects oriented on the current needs.





List planned activities in 2024 for this Term of Reference

Continue assisting the corresponding members of the TFYS to motivate them to create YS groups in their country and region. Moreover, we are permanently trying to get more committed with our activities by doing surveys and seeking other points of view for our programmes. The TFYS is the largest TF comprising 48 corresponding members.

Terms of reference 5: MENTORSHIP PROGRAMME INTERVIEWS

List 2023 accomplishments for this Term of Reference

This mentoring minutes program is intended to educate IFCC Young Scientist members on any current mentorship program in the laboratory research area. The program focuses on “how, when, what and why” about the existing mentor and mentee relationship and tips on how others can learn from their relationship. The interviews were published in the IFCC e-News.

List planned activities in 2024 for this Term of Reference

As every year, during 2024 there will be 3 interviews published on the IFCC e-News. This mentoring minutes program is intended to educate IFCC Young Scientist members on any current mentorship program in the laboratory research area.

Terms of reference 6: RADIO EL MISCROSCOPIO

List 2023 accomplishments for this Term of Reference

Active participation in the selection of interviews and scientific support for the interview questions of the different topics.

List planned activities in 2024 for this Term of Reference

During 2024 we will continue supporting the Radio El Microscopio with scientific knowledge.

Terms of reference 7: LIVEMYLAB PROJECT

List 2023 accomplishments for this Term of Reference

LiveMyLab project consists in a virtual/remoted visit of a real lab, driven by young scientists. During 2022 we design the format of the videos and sent letters with invitation to participate sending videos were sent in English, Spanish, French and Chinese.

During 2023 we worked together with the CPD to call for videos and develop material used during the Lab Week.

List planned activities in 2024 for this Term of Reference

During 2024 we will continue working in this programme with CPD. Same videos with different edition will be used by CPD for other activities.



Terms of reference 8: LEADERSHIP WORKSHOP

List 2023 accomplishments for this Term of Reference

Promote the development of a critical mass of young leaders, with leadership skills and strategic planning of projects with social impact.

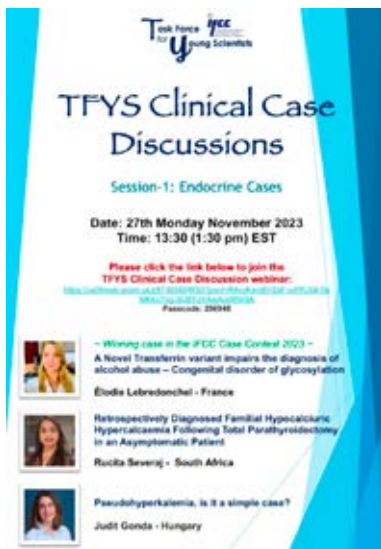
The Workshop will be promoted by YS members of the TS-YS from Latin America.

In 2021 we had the first experience of the Leadership workshop with excellent results. An indicator of this is the creation of a regional YS Group in Latin America with the YS participants of the first workshop.

The second edition of the Leadership workshop was in 2022 with 32 YS from all LATAM.

The third edition of the Leadership Workshop concluded in May 2023 with 32 YS from all LATAM. List planned activities in 2024 for this Term of Reference

The fourth edition of the Leadership Workshop is scheduled for March 2024.



Terms of reference 9: CLINICAL CASE STUDIES

List 2023 accomplishments for this Term of Reference

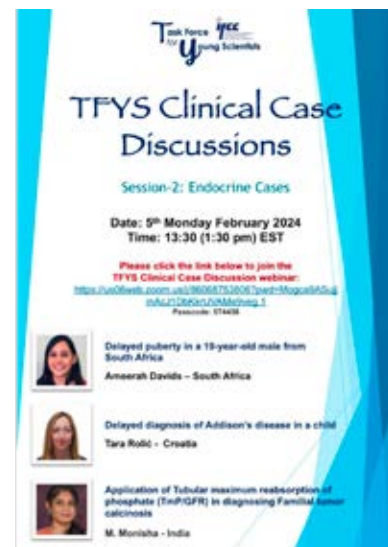
During 2023 we developed a clinical case study project where YS from the IFCC community will present their experience with interesting real-life case studies. We designed a guideline for clinical case abstracts and all YS were invited to submit interesting clinical cases for which we received more than 40 submissions for the first call for abstracts. All cases submitted to TF-YS Clinical Case Discussions undergo peer review with an objective grading based on a point system. The first online Clinical Case Discussion session will take place in November 2023 following which we intend to hold monthly clinical case discussions. For the presentation of the clinical case studies, we will invite IFCC experts to make comments on the clinical case to increase the discussion and understanding. We intend to publish all presented cases in a booklet as 'TF-YS Clinical Cases: Role of the Clinical Laboratory on Patient Care' along with comments from the experts in the field.

Moreover, we are in contact with Prof Janos to publish a selection of the Clinical Case Reports in the eJIFCC. First presentation: November 27th, 1:30 pm EST Topic: Endocrinology

More information: <https://www.ifcc.org/TFYS-Clinical-Case-Discussions>

List planned activities in 2024 for this Term of Reference

During 2024 we plan to continue with the presentations of the selected clinical cases. The case reports will be presented in virtual meetings regularly in a monthly basis. The Case reports were grouped into topics (Endocrinology, Haematology, Clinical Chemistry, etc) so each presentation follows the same topics.



Term of reference 8: YS FORUM

List 2023 accomplishments for this Term of Reference

Young Scientists are the future of laboratory medicine and comprise the major workforce of laboratory professionals. Future leaders need to be trained and encouraged to succeed in their role, ideally with the support of experienced leaders. To make this feasible, YS must have activities that encourage their participation, offer opportunities of training and improve communication and networking.

For this 2023, we prepared the SECOND edition of the YS FORUM that took place in the WorldLab-EuroMedLab ROME 2023.



List planned activities in 2024 for this Term of Reference

For this 2024, we prepared the third edition of the YS FORUM that took place in the IFCC WorldLab Dubai 2024.

Following the method used in the first two editions, to develop the programme, we need to know the YS nominated for the IFCC-ROCHE scholarship.



Terms of reference 9: DIGITAL COMPETENCES

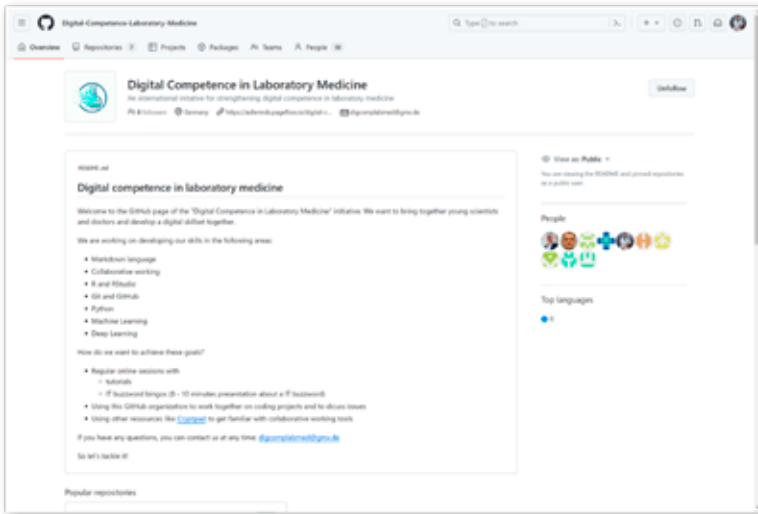
List 2023 accomplishments for this Term of Reference

During 2022 EFLM conference in Munich, we started developing a joint programme with DGKL (Jakob Adler) to offer selected material on digital competences for YS. This programme started in 2023 with the coordination of Jakob Adler and Marie Lenski. In this period, we conducted a survey that was distributed to all YS, we presented a poster in the IFCC-EFLM Euromedlab Rome 2023 and we published an article on Digital competences in Laboratory Medicine (doi.org/10.1515/labmed-2023-0021).



List planned activities in 2024 for this Term of Reference

In January of 2024, we will launch a platform hosted in GitHub with repository material and start the training meetings.



Terms of reference 10: “MEET A YOUNG SCIENTIST”

List 2023 accomplishments for this Term of Reference

During 2023 we presented the idea:

This activity relies on the increase of communication of TF-YS with corresponding members and help them to communicate with the laboratory medicine community. It consists in

1. A meeting between 1 corresponding member and 1 Core member of IFCC-TF-YS to present IFCC TF-YS activities and help corresponding members to get involved in these activities.
2. To prepare an interview of the corresponding member, that will be published in IFCC eNews and on IFCC-TF-YS communication channels (Facebook, instagram...)

List planned activities in 2024 for this Term of Reference

During 2024 we plan to execute the plan accordingly.

Terms of reference 11: PODCAST

List 2023 accomplishments for this Term of Reference

There was a call for podcasts. It will be a collaborative project between TFYS and CPR.

The podcast will be 3-5 mins in length.

It will be edited and spotify software.

List planned activities in 2024 for this Term of Reference

During 2024 we will focus in this initiative. The first confirmed YS - Dr Sibtain Ahmed.

Terms of reference 12: “CRITICAL LABORATORY RESULTS SURVEY”

List 2023 accomplishments for this Term of Reference

A survey is launched by Judit Gonda, a Young Scientist from Hungary, that aims to get to know the protocol and habits of Reporting Critical-Risk Laboratory Results in different countries.

The survey is available in English, French, and Spanish.

English version: fm.addxt.com/f/?t=YOyA21

French version: fm.addxt.com/f/?t=P2mP0F

The aim of this survey is:

- to see whether different countries use national guidelines or whether they have any protocol in their respective institutions
- to compare the protocols between countries
- to describe how critical values for tests are defined, and how they are reported to clinicians
- to conclude on harmonized practical tips.

More information about the survey is available in English, French and Spanish in the IFCC eNews published in November 2023: <https://ifcc.org/ifcc-communications-publications-division-cpd/ifcc-publications/enewsletter/>

List planned activities in 2024 for this Term of Reference

During 2024 we will analyze and publish the results of the survey.

Terms of reference 13: “BOOK CHAPTERS”

List 2023 accomplishments for this Term of Reference

Based on the collaboration between YS built through IFCC activities, YS were able to get together in the publication of several book chapters for a Springer Book; Genetic Syndromes – A Comprehensive Reference Guide. IFCC YS were able to get involved in writing five chapters on inborn errors of metabolism.

The chapters include:

- Adenosine kinase deficiency
- Multiple sulfatase deficiency
- Glutaric aciduria
- 3-methylcrotonyl-CoA carboxylase deficiency
- Polyendocrine polyneuropathy syndrome



The image shows a page from a book chapter titled "Hypermethioninemia Due to Adenosine Kinase Deficiency". The authors listed are Udara D. Senarathne, Santiago Fares Tale, Neluwa-Liyanage R. Indika, Pierre-Hadrien Becker, Pauline Gaignard, and James C. G. Doery. The page includes a table of contents and a section for other names.

Contents	
Other Names	1
Definition	1
Etiology	2
Clinical Manifestation	4
Diagnosis	4
Management	7
References	7

Syndrome OMIM number: # 614300
Affected Gene/Chromosome: *ADK*
Gene OMIM number: *102750

Other Names

- Adenosine kinase deficiency
- Mental retardation, autosomal recessive 8

List planned activities in 2024 for this Term of Reference

This is a live reference guide, which can be updated with new information. Therefore, the YS who got involved in writing the chapters will continue to prepare for the second edition of the book chapters in the future.

Terms of reference 14: “DYNAMIC ENDOCRINE TESTING SURVEY”

List 2023 accomplishments for this Term of Reference

We intend to initiate a survey on dynamic endocrine function testing, especially in the paediatric population to understand the current practices and extend this activity to collaborate research work between YS from different countries to work together for reference intervals and cut-off limits for dynamic endocrine function tests such as hCG stimulation test, Short Synacthen test, etc. The collaborations for hCG stimulation test is already commenced.

List planned activities in 2024 for this Term of Reference

This activity will continue into the year 2024 to cover the major dynamic endocrine function tests.



Terms of reference 15: “E-NEWS ARTICLES”

List 2023 accomplishments for this Term of Reference

The Latin American Confederation of Clinical Biochemistry (COLABIOCLI) – Young Professionals Working Group present in CALILAB 2022 by Santiago Fares Taie

IFCC Professional Scientific Exchange Programme (PSEP): My experience in Fares Taie Biotecnología, Mar Del Plata, Argentina by Ana Sofía Duarte Acuña

IFCC Professional Scientific Exchange Programme (PSEP): my experience at the National Centre of Microbiology, Institute of Health Carlos III, Madrid, Spain by Daniel Mekonnen Nigus

IFCC Professional Scientific Exchange Programme (PSEP): My experience at Hennepin Healthcare Research, HCMC in Minneapolis, USA by Blanca Fabre Estremera

The SEQCML focuses its II Conference for Residents and New Clinical Laboratory Specialists on the professional reinforcement of communication skills

by the Group of Residents and Young Scientists of the Spanish Society of Laboratory Medicine (SEQCML)

Mentorship Interview
by the IFCC Task Force for Young Scientists

IFCC PSEP program report – Ferdy Royland Marpaung
by Ferdy Royland Marpaung.

The Second IFCC Young Scientists’ Forum: IFCC WorldLab/EuroMedLab 2023, Rome
by IFCC YS-TF

Professional scientific Exchange Program (PSEP): My Experience at Laboratory of Tor Vergata hospital Rome, Italy, 2023 by Mohammed Al Haddad

Nov 2023: "IFCC Young scientists - Challenges of digital technologies and artificial intelligence in laboratory medicine" by M. Lenski, A. Rampul

Nov 2023: "Young Scientists initiative: Survey on Reporting Critical-Risk Laboratory Results" by Judit Gonda, Marie Lenski, Maria Schroeder Castagno

List planned activities in 2024 for this Term of Reference

We will continue working on this topic, publishing relevant articles for young scientists in each issue of IFCC eNEWS.

4. ADDITIONAL INFORMATION

TF-YS Group meetings take place at least 1 per month from January to December inclusive. (Minimum meetings: 12 per year)

During 2023 we published an article on Digital Competence in Laboratory Medicine:

doi.org/10.1515/labmed-2023-0021 and a book chapter on Adenosine Kinase deficiency https://doi.org/10.1007/978-3-319-66816-1_1758-1

Additionally, we presented a poster on the Worldwide Survey about Residency Training during the Euromedlab, Rome 2023: RESIDENCY TRAINING AROUND THE WORLD: ANALYSIS OF A WORLDWIDE SURVEY

Santiago Fares Taie - Chair IFCC-TF-YS

Task Force History (TF-H)

IFCC History Book: The IFCC in the 21st Century: Evolution or Revolution?

Bernard GOUGET, Mathias M. MÜLLER, T-H co-chairs

A retrospective analysis of IFCC's journey since the dawn of the 21st century reveals remarkable achievements. Over this period, laboratory medicine has undergone a profound transformation, emerging as a highly intricate discipline. Throughout this evolution, the IFCC has demonstrated remarkable innovation and proactive engagement, establishing strong scientific, medical, and industry alliances to address pressing health challenges.

Delving into the IFCC's rich repository of documents spanning the first quarter of this century, we are very optimistic about the future evolution of the international federation and the membership of the dedicated professionals who are driving its evolution. The IFCC's historic importance in shaping the healthcare landscape, coupled with its unwavering commitment to fostering multidisciplinary collaborations, heralds a new era of progress and will undoubtedly continue to do so in the future. The passionate and bold scientific spirit of the IFCC community and its broad stance from a global perspective place it firmly on the front lines in the fight against the major health challenges plaguing humanity.

This latest IFCC history book provides an enriching journey into the organization's activities, offering deeper insights into its achievements. While some accomplishments are familiar, others shed new light, enhancing our comprehension of the federation's evolution. Throughout the 21st century, the IFCC has undergone significant transformation to address the ever-evolving challenges and advancements in medicine. IFCC plays a pivotal role in advancing the standards of practice, education, training, innovation, and research within the field. Continuously adapting, IFCC remains dynamic, constantly realigning its focus to stay abreast of emerging discoveries. Central to its mission is the principle of equity across its six regions, which serves as a cornerstone in its endeavors.

The Task Force on History has meticulously examined the milestones that have shaped the evolution, breakthroughs, disruptive moments, transformative events, achievements, and challenges defining the IFCC's dedication to excellence and innovation in the field of laboratory medicine, to maintain its leading role in advancing laboratory medicine on a global scale. The IFCC depends heavily on volunteers to manage the organization and carry out its wide array of activities and programs. In the 21st century, international federations serve as networking and collaboration platforms. These collaborations facilitate the exchange of ideas, expertise, and resources to collectively address common challenges and advance the field.

Future readers will also encounter renowned and visionary colleagues who laid the foundation for IFCC's success. These remarkable individuals, in addition to their professional activities, devoted significant time and effort to the organization. Through their collaborations, the exchange of ideas, expertise, and resources facilitated collective advancement in addressing common challenges and promoting the federation's development. The history book provides insight into the spirit of these individuals, who are revealed through various chapters advocating for the recognition of laboratory medicine as a critical component of global healthcare systems. They actively worked towards influencing policies related to laboratory medicine, accreditation standards, and healthcare regulations to ensure the highest standards of patient care and safety. Additionally, they advocated for the development of guidelines and standards for the ethical and responsible use of technology in laboratory medicine.

We sincerely hope that the IFCC history book will raise awareness of the tremendous potential of the IFCC as a leading international organization, enabling it to continue its work for the benefit of all. The book will be available in 2025.

Mathias M. Müller and Bernard Gouget, TF-H Chairs





Task Force Corporate Members (TF-CM)

2. CHAIR & MEMBERSHIP/TERMS OF OFFICE

Name	Position	Country	Term
Jean-Sébastien Blanchet	Chair	12/24	2 nd
Yan Lui	Secretary	01/24	1 st
Vincent Chen	Member	04/23	1 st
Brendan Meyer	Member	04/23	1 st

*2 open positions under review by Jean-Sebastien Blanchet

Retired/Retiring/Changes (4):

Alessandro Ortisi	Former Secretary
Joe Passarelli	Former EB Representative/Member
Andy Quintenz	Former Member
Tricia Ravalico	Former Chair, but active as EB Representative

Corresponding Members (8):

Jan Gorka,ì	DiaSys Diagnostics Systems
Gavin Tu	Maccura Biotechnology
Lily Li	QuidelOrtho
Anne Skurup	Radiometer Medical ApS
Jamie Philips Deeter	Roche
Melvin Passay	Sansure BioTech Inc
Jose Gutiérrez	Siemens Healthineers
Maurizio Gramegna	Technogenetics

3. TERMS OF REFERENCE

Reporting instructions for Terms of Reference for all Committees, Taskforces and Working Groups, please provide the following information

Term of reference 1:

To improve the engagement of Corporate Members with the IFCC

2023 Outcomes:

- Strong and diverse corporate voice with sustained/growing membership on the IFCC TF-CM with ~12 companies represented. It was an unusual year since we had so many retired members (who retired from their companies per above, not simply from the TF), but in virtually all cases, replacements were found and/or people are continuing to support the IFCC TFCM in new roles.

- Developed and activated an annual corporate member survey which was presented to the IFCC EB at EML (Rome) and to corporate members at ADLM (Anaheim) and ELM (Rome). Takeaways support excellent satisfaction across corporate members.
- Thank you notes to all members of the IFCC TF-CM which could be shared with their leadership, thanking them for their time and to reinforcing their meaningful IFCC involvement

List planned activities in 2024 for this Term of Reference

- Continued implementation of the annual Welcome package and annual survey
- Complete nominations for retired full members
- Consider thank you letter from the EB vs chair of the IFCC TF-CM

Term of reference 2

To serve as the “voice of industry” and be more accessible to all IFCC teams and leadership, enabling a more diverse understanding and appreciation of needs among corporate members and the IFCC

List 2023 accomplishments for this Term of Reference

- Write several articles highlighting the industry voice in the IFCC eNews.
- Served as voice of industry across multiple requests this year associated with other IFCC working groups.
- Constructed cross-industry letter as it related to macropolactin activities/concerns across teams.
- Explored joint letter in support of many initiatives associated with the emerging market division with Nadai Rafai.

List planned activities in 2024 for this Term of Reference

- eNews article highlighting new membership and focus for 2024
- Communication to new chairs/working group leads on the availability and opportunities to consult with the IFCC TF-CMs

Term of reference 3

To facilitate discussion among Corporate Members and identify common topics of interest and/or concern

List 2023 accomplishments for this Term of Reference

- A major concern in 2023 was the Lab week effort which was not free from commercial bias. The team met to review rules of engagement for future videos which were accepted and welcomed by the CPR committee and the CPD.

List planned activities in 2024 for this Term of Reference

- Areas of concern get reviewed and discussed each month, leading to survey feedback that suggested some companies feel serving on the IFCC TF-CMs is a favorite highlight for them with IFCC
- Many opportunities exist under the new chair with more brainstorming planned following the first team meeting this February.





Term of reference 4

To increase awareness with other Corporate Members of IFCC TF-CM and to encourage their participation in IFCC activities

List 2023 accomplishments for this Term of Reference

- The welcome package from 2022 was designed to meet this need. It was launched in 2023 with success.
- The Corporate member annual survey was also designed to meet this need, highlighting opportunities for improved collaboration and participation

List planned activities in 2024 for this Term of Reference

- Recent survey findings suggest more opportunities exist to enhance participation of smaller companies. More to follow upon activation by the new chair.

4. ADDITIONAL INFORMATION

While not specifically addressed above, a fifth term of reference and passion of all members of the IFCC TF-CMs also includes:

Assisting IFCC in promotion of science, innovation, and advancement of the essential contribution of laboratory medicine to health care

5. 2023 MEETINGS / CONFERENCE CALLS HELD (VIRTUAL & IN PERSON)

10 meetings were held in 2023:

January 10 (virtual)

March 14 (virtual)

April 11 (virtual)

May 9 (virtual)

May 22 (Face to Face)

July 11 (virtual)

August 8 (virtual)

September 22 (virtual)

October 10 (virtual)

Nov 14 (virtual)

6. MEETING SCHEDULE IN 2024

Official confirmations/notifications be arranged by the new chair.

Projected dates include:

- Tuesday, January 23
- Tuesday, March 19th
- Tuesday, May 21 or F2F in Dubai (May 26th)
- Tuesday, July 23 or F2F in Chicago
- Tuesday, September 24th
- Tuesday, November 19th

7. PUBLICATIONS/CONFERENCE PRESENTATIONS/WEBINARS

Three articles were published in eNEWS this year on behalf of the IFCC TF-CM with another still planned for 2024.

- Best Practice Article on Maximizing Industry Value with the IFCC [JP]
- Beginners guide on How to Propose Investigator led studies [NK + JSB + AS]
- How Industry wants to help patients... [AQ + AO]
- The importance and usefulness of being IFCC CM for both a small and big companies AQ + AS

ADDITIONAL INFORMATION

- The participation rate quite high per each meeting, demonstrating a remarkable mean contribution by all the members (95%) and corresponding members (82%). A gap this year was retiring roles which are now filled for chair and secretary.
- No further support is needed at this time. This TF-CMs is pleased with the rapid turnaround of answers from the EB to our team.
- We do believe more questions can come to the TF-CM from the EB to more readily be a consult to the EB.
- A recent survey indicates that overall CMs are satisfied with the IFCC.

Tricia Ravalico, TF-CM Chair, and Jean-Sébastien Blanchet, TF-CM incoming Chair

Task Force on Global Newborn Screening (TF-NBS) Joint Task Force of IFCC and International Society of Newborn Screening (ISNS)

2. CHAIR & MEMBERSHIP/TERMS OF OFFICE

Name	Position	Country	Term
J. Bonham	Co-Chair/ISNS	UK	1st
V. Leung Pineda	Co-Chair	US	1st
M.A. Ascurra de Duarte	Member	PY	1st
M. Kase	Member	FI	1st
V. Leung-Pineda	Member	US	1st
D. Webster	Member/ISNS	AU	1st
E. Lebredonchel	Member/ Young Scientist	FR	1st
K. Valdyanathan	Consultant	IN	1st

3. TERMS OF REFERENCE

Reporting instructions for Terms of Reference for all Committees, Taskforces and Working Groups, please provide the following information.



Term of reference 1

- Select countries for IFCC's NBS Pilot Project via a call for participation to IFCC member societies using pre-defined selection criteria. A formal call for participation by developing countries will be issued soon by the IFCC office.

Preamble:

- Based on the initial survey & follow up from 2021:
- Initial List of Countries (2022): Bolivia, Guatemala, Dominican Republic, Peru, South Africa, Uganda, Nigeria, Nepal, and Bangladesh.
- Later (2023): Dominican Republic, Easter Europe (Albania, Romania, Ukraine, and Georgia), Sri Lanka, Kazakhstan
- Later (2024): Indonesia, Small Island Developing States (Pacific), Ethiopia, Algeria

List 2023 accomplishments for this Term of Reference

- Visits undertaken:
 - Cape Town – South Africa - February 2023
 - Dominican Republic - February 2023
 - Romania March 2023

List planned activities in 2024 for this Term of Reference

- Visits planned or under consideration: Kazakhstan – April 2024, Nigeria (TF member John Anetor will outline for a proposal for 1-2 in-country meeting), Bolivia.
- New Countries Identified (2023), discussion ongoing: Nepal (a virtual initial call with Nepal to explore possibilities in that country as well), Georgia, Sri Lanka, Indonesia
- Ethiopia has expressed an interest to develop NBS and have been asked to submit a proposal – this is in preparation

Term of reference 2&3

- Identify potential participating centres (e.g. healthcare facilities and laboratories) and stakeholders (e.g. government ministries and/or agencies) within each Partner Country.
- Engage with these centres in order to conduct situation assessment (i.e. information in regard to NBS-related diseases as well as resources/barriers in the Partner Country).

Participating Centers & Stakeholders Identified in Partner Countries:

Dominican Republic:

- **Task Force Team:**
Dr Cecilia Queijo (Uruguay), Dr Gustavo Borrajo (Argentina) Dr Van Pineda (US)
- **Dominican Republic Team:**
 - National Society of Pediatrics with Dr. Luz Herrera, president, and Drs. Rosa Nieves and Ruth Sheppard, leads of the Hematology/Oncology Pediatrics division.
 - The Health Minister, Dr. Daniel Rivera, the Vice Minister for Collective Health, Dr. Eladio Perez, Special Counsel for the Health Minister, Dr. Eddy Perez Then, Vice Ministry for Collective Health Director, Dr. Yocastia de Jesus, and Director for

Disability Services, Father Jorge William Hernandez. o CODOBIO (Dominican College of Bioanalysts) the local IFCC representative society.

- Senator Diaz is a pediatrician by training and a strong advocate of NBS.

Romania:

- **TF Team:** Dr J R Bonham (UK) and Dr M Scarpa (Italy)
- **Romanian Team:** Dorica Dan, President Romanian Prader Willi Association, Romanian National Alliance for Rare Diseases, Romanian Association for Rare Cancers

South Africa:

- **TF Team:** Dr JR Bonham and Dr Dianne Webster
- **South African Team:** Helen Malherbe, Marianne Gomes, Chris Vorster, George Vanderwatt and Tahir Pillay

Nepal:

- **TF Team:** Profs Bonham and Webster
- **Nepal Team:** Dr Apeksha Niraula. Subsequently several individuals from Nepal with interest in NBS were identified including Dr Mishra from Department of Biochemistry B. P. Koirala Institute of Health Sciences; Dr. Nitin Thapa is a family practice physician in Washington State, Dr Janine Khan.

Sri Lanka:

- **TF Team:** Dr J R Bonham
- **Sri Lankan Team:** Prof Manjula, Prof Nakamura

Indonesia:

- **TF Team:** Dianne Webster & Aysha Habib Khan
- **Indonesian Team:**
 - Dr. Thyrza L Darmadi, SpPK: thyrza.darmadi@gmail.com, Indonesian Association of Clinical Chemistry and Indonesian Association of Clinical Pathology and Laboratory Medicine
 - Prof. Aman Pulungan, SpA, Subsp End, FAAP, FRCPI (Hon), amanpulungan@mac.com, Indonesian Pediatric Association
 - Dr. Muhammad Faizi, SpA (K): muhammad_faizi@yahoo.com and dr.fayzi@gmail.com. Indonesian Pediatric Association
 - Dr. Windarwati, M.Sc, SpPK(K): windarwati21@gmail.com , Indonesian Association of Clinical Chemistry and Indonesian Association of Clinical Pathology and Laboratory Medicine
 - Dr. Delita Prihatni, SpPK, Subsp H.K(K), Subsp. Onk.K (K), M.Kes: delitapri@yahoo.com, Indonesian Association of Clinical Chemistry and Indonesian Association of Clinical Pathology and Laboratory Medicine
 - Dr. Agustini Utari, M.Si.Med, SpA(K): agustiniutari@gmail.com, Indonesian Pediatric Association



Algeria:

- **Task Force Team:** Elodie Lebretonchel, Praticien Hospitalier en Biologie Médicale, PharmD, PhD
- **Algerian Team:** Dr Mesli, Clinical Chemist in NBS, Bordeaux, France; Dr Nachi, Head of Molecular Biology, University Hospital of Oran, Algeria; Dr. Meguenni Lyes, head of the maternity department at the University Hospital of Oran

List 2023 accomplishments for this Term of Reference (Situation Assessment & Barrier Identification):

Dominican Republic: Current NBS programme does not exist, but groundwork was laid in 2015 in a Proyecto de Ley (Bill of Law – not yet passed). A centralized laboratory site was agreed upon and construction had begun. However, activity suspended due to Covid-19.

A country meeting was held to spark momentum in Feb 2023, which brought different stakeholders together along with government representatives. Legislation on Newborn screening Bill is on agenda and the discussion is awaited. Further, 2024 is election year in DR, that has slowed the progress. Construction of the building that will house the NBS lab is ongoing. There was revision to include other services unrelated to NBS in the building, but NBS is still slated to have space in the building. There has been change in leadership at the Dominican Society of Paediatrics and the IFCC local organization (CODOBIO).

Romania: 200,000 births pa, already screening for PKU and CHT, recently added CF. There are 5 laboratories and there is a wish to expand but requires improved co-ordination and greater access to confirmatory testing and treatment. Two in country meetings were held in Bucharest – 24th March 2023:

- A very well attended morning policy maker meeting with approximately 25 attendees: clinicians, scientists, patient advocates, government ministers and policy makers. Including The president of the Health Senate of Romania and the Minister from the Ministry of health together with the coordinator of the National Health Program. Held in the Peoples Palace – the state Parliament.
- An equally well attended practical afternoon workshop meeting, with around 25 attendees made up of scientists, clinicians, and patient representatives. A journey through the screening pathway with those directly involved.
- A screening project for 32 diseases in 11 counties of Romania was implemented to cover all newborns, which represents ¼ of the country. VP will have an update of the project soon to share.

South Africa: Discussion with SA began in late 2022. Following which a two-day workshop was held on 22nd Feb 2023 in Cape Town, which was attended by 18 invited participants. The meeting included key clinicians (3), chemical pathologists (academics and researchers) (5), national and provincial government officials and policy makers (5), international experts (3), WHO (1), patient voice (1)

The group in SA has received support from NDOH for the demonstration project in two states. A summary paper of the projects has been published in Rare Diseases & Orphan Drugs Journal as Newborn screening in South Africa: the past, present, and plans.

The group is still pulling together the NBS demo project and seeking/applying for relevant funding to support this work, including a Chan Zuckerberg opportunity (Rare as One), being submitted later this week and another opportunity at HTA due in early March. Several presentations were

made on NBS at the RareX conference. The SASHG (Southern African Society for Human Genetics) biennial conference is taking place 27-29 Oct in Sun City and there is a plan to submit an abstract for an oral presentation to share an update from the NBS group there.

Nigeria: Discussions with Nigeria began in 2022. Nigeria had quasi-national screening essentially based at the UCH. Ibadan- Consortium on NBS (based in UCH) was formed in 2021. An 'in country' meeting was planned for October 2023 but had to be abandoned because of the lack of support.

Pockets of activities in Nigeria are largely in the sickle disease. NBS screening using POCT is ongoing in UCH; the plan is to merge with CNS-N integrated program. JB added that Marika Kase presented 'Newborn Screening Experience and World Programs' at 8th ACCN Meeting 18th – 21st October 2023, which was enthusiastically received and stimulated national interest.

Nepal: A zoom with Dr Apeksha, Profs Bonham and Webster was held on 13/12/2022 with other faculty from Clinical Biochemistry and Paediatrics. The IFCC-ISNS chairmen wrote two letters to Dr Apeksha, one suggesting that a way forward to progress metabolic screening in sick children was to seek training in tandem mass spectrometry methods, preferably in a laboratory that also did newborn bloodspot screening. The second suggested that the best way forward for newborn bloodspot screening for Nepal would be to form a working group including those folk on the zoom but especially also including health funders and policy makers (government), maternity services/obstetrics, well child service providers. The IFCC application for the professional exchange program has been sent to Dr Apeksha. No reply has been received to date (29/02/2024).

Sri Lanka: Discussions with Sri Lanka began in mid-2023. Currently, there is screening for CHT & PKU with good coverage and there is a wish to expand on screening for IMDs. Capacity building through overseas training is ongoing to gain experience with confirmation & treatment. MSUK and the national team are going to apply for a research grant from Applied Global.

Indonesia: Discussion with Indonesia started in 2023. As Indonesia has the 5th highest birth rate in the world with 5 million babies born annually, this makes it a very suitable for initiating NBS. Currently, NBS is available for CH, CAH and G6PD deficiency. Indonesia has accelerated the coverage of newborn screening with the relaunching program of NBS last year from the Ministry of Health. Before, only 3000 babies per week being screened. As of 2023, Indonesia has reached 60000 per week (in total, 1,3 million babies screened in 2023 out of 4.8 million babies born in Indonesia). This year, the target is to screen 80.000 babies per week (reaching 4 million babies).

Algeria: A Virtual meeting on December 20th, 2023, was held. Dr. Meguenni Lyes, head of the maternity department at the University Hospital of Oran, is very interested in the newborn screening project. they have fallen behind on drafting the project proposal. DR Nachi Mourad is planning to organize a virtual or in-person meeting with the DSP - Public Health Department of the Oran province.

Kazakhstan: Kazakhstan has 20m population. 450,000 births pa, already screening for PKU and CHT, recent pilot for CF. Laboratories are present in each region. There is a wish to expand for IMDs but requires improved co-ordination and greater access to confirmatory testing and treatment. However, there is strong advocacy team and indications of governmental support, making it a suitable place to start.





WHA77: A satellite meeting is planned prior to the WHA77 meeting in Geneva in collaboration with: Mates4Kids, ASH, International Pediatric Association, Geneva University and contributions from the Minister for Health in Indonesia and the WHO

SIDS4 meeting: A meeting on 30th May supported by Lehigh University (USA), Mates4Kids and ISNS to consider the development of NBS in Small Island Developing States, aperticularly in this context Pacific Islands

Term of reference 4

- Identify ways in which the IFCC can provide lacking resources and support. Funding to support 'in-country visits'

List 2023 accomplishments for this Term of Reference

Visits to South Africa and the Dominican Republic

List planned activities in 2024 for this Term of Reference

'In country' visit to Kazakhstan

Organisation of a satellite meeting at WHA77

In Country visit to Nigeria – outline submitted.

Term of reference 5

- Develop a detailed protocol for an initial Pilot Project specific to each Partner Country. The proposal will be presented to the Partner Country via the respective IFCC member society. The Pilot Project implementation must be conditional on the Partner Country's commitment to its continuation following IFCC's initial financial support.
- Protocols for detailed planning will be dependent upon governmental project approval but an example of the work to be developed can be found in the South African example: https://www.researchgate.net/publication/378568323_Newborn_screening_in_South_Africa_the_past_present_and_plans_for_the_future#fullTextFileContent

Term of reference 6

- Implement the Pilot Project in participating centres in each Partner Country in collaboration with the IFCC member society and other stakeholders.

Term of reference 7

- Monitor and evaluate the progress of the overall IFCC NBS Initiative, as well as the progress of specific Pilot Projects, through data collection and on-site/virtual visits by dispatching scientific teams to each Partner Country.

Term of reference 8

- Plan for the expansion of the IFCC's NBS Initiative, as well as the expansion of each NBS Pilot Project.

ADDITIONAL INFORMATION

Worldmap of Newborn Screening

- There is a significant literature on the development of NBS in LMICs but these necessarily become out of date relatively quickly. It is possible with current software

to develop a virtual map of screening around the world using drop down menus reflecting screening activity on a country by country basis. The software has been obtained and an initial 'proof of concept' is to be demonstrated at the October 2023 meeting of the APHL/ISNS

- This important project has been strengthened with the collaboration of a group of committed individuals who have recently published a summary of the world position based on extensive research over the last two years: Therrell, B.L.; Padilla, C.D.; Borrajo, G.J.C.; Khneisser, I.; Schielen, P.C.J.I.; Knight-Madden, J.; Malherbe, H.L.; Kase, M. Current Status of Newborn Bloodspot Screening Worldwide 2024: A Comprehensive Review of Recent Activities (2020–2023). *Int. J. Neonatal Screen.* 2024, 10, x

Collaboration and input into work with the WHO

- WHO Guidelines for NBS in LMICs (Low Middle Income Countries). Dr. Ayesha De Costa has shared plans with the TF on a project by WHO to develop guidelines to initiate a national NBS program targeted towards Low and Middle Income countries. The goals for this project dovetail very well with the work by this TF, and joint working and input is envisaged.

5. 2023 MEETINGS / CONFERENCE CALLS HELD (VIRTUAL & IN PERSON)

- Task Force meeting 22nd November 2023 – Virtual
- Task Force meeting 20th September 2023 – Virtual
- Task Force meeting 22nd May – 2023 In person
- Task Force meeting 30th March – 2023 Virtual

6. MEETING SCHEDULE IN 2024

- Task Force meeting 4th March – Virtual
- Task Force meeting 27th May – In person

7. PUBLICATIONS/CONFERENCE PRESENTATIONS/WEBINARS

Malherbe et al. *Rare Dis Orphan Drugs J* 2024;3:xx

DOI: 10.20517/rdodj.2023.49

Rare Disease and Orphan Drugs Journal

Newborn screening in South Africa: the past, present, and plans for the future

Helen L. Malherbe^{1,2}, Jim Bonham^{3,4}, Michelle Carrihill^{5,6}, Karmani Chetty⁷, Engela H. Conradie¹, Marli Dercksen¹, Hilary Goeiman⁸, Marianne C. M. Gomes^{9,10}, Brenda Klopper¹, Neil McKerrow^{5,9,11}, Carmencita Padilla¹², Tahir S. Pillay^{4,7,13,14}, Bronwyn Roussot¹⁵, Tumelo M. Satekge¹⁶, Michael Urban¹⁷, George van der Watt^{5,6}, Heleena Vreede^{6,7}, Dianne Webster^{3,18}, Marco Zampoli⁵, Barend C. Vorster¹

Van Leung-Pineda Co-Chair and James Bonham Co-Chair/ISNS - TF-NBS



Task Force on Global Lab Quality (TF-GLQ)

2. CHAIR & MEMBERSHIP/TERMS OF OFFICE

Name	Position	Country	Term	Time in Office
E. Amann	Co-Chair	DE	2 nd	2024 01 - 2026 12
Q. Meng	Co-Chair	US	2 nd	2024 01 - 2026 12
I. Blasutig	Member & Secretary	CA	2 nd	2024 01 - 2026 12
R. Bais	Member	AU	2 nd	2024 01 - 2026 12
A. Carobene	Member	IT	1 st	2024 03 - 2026 12
JM. Giannoli	Member	FR	2 nd	2024 01 - 2026 12
JA. Perret-Liaudet	Member	FR	2 nd	2024 01 - 2026 12
A. Thomas	Member	UK	2 nd	2024 01 - 2026 12
A. Vassault	Member	FR	2 nd	2024 01 - 2026 12
J. Lin	Corp. Rep./Abbott	US	2 nd	2024 01 - 2026 12
G. Henriksen	EQALM Rep	DK		

3. TERMS OF REFERENCE

Term of reference 1

> Support 100 labs participating in the pilot program

List 2023 accomplishments for this Term of Reference

At the beginning of 2023, participating countries were encouraged to extend the program from 5 labs each to 10 labs.

During 2023, the 100 participating labs were provided with EQA materials, interpretation software, specific training and support concerning their products by One World Accuracy (1WA).

The TF-GLQ reviewed all reports and discussed the issues and problems of all those labs on a monthly basis.

In general, participation rates and performance were quite different by the different participating countries and labs: Some labs scored constantly high with acceptable rates of > 90% of all tests, whereas other labs showed acceptance rates of only between 50 – 80% of all tests, which by all means is extremely poor.

Several underperforming countries/labs were identified: Zambia, Malawi, Columbia and Bolivia. Special attention was given to those countries.

List planned activities in 2024 for this Term of Reference

At the end of 2023, the EB decided not to prolong the contract with 1WA. The provision of EQA material by 1WA thus ended in December 2023.

Individualized formal TF-GLQ letters were sent to the liaison managers of the 10 participating countries to inform their 10 participating labs on terminating the provision of EQA material free of charge.

Term of reference 2

> Satisfaction survey on IFCC EQA pilot program participating countries

List 2023 accomplishments for this Term of Reference

A second satisfaction survey (the first one was conducted in 2022) was sent to the 100 participating labs, asking:

- Feedback on the satisfaction of the initial pilot phase (2021-2023).
- Feedback on your current and future needs and requests for training materials.

Answers are expected by April 30, 2024.

List planned activities in 2024 for this Term of Reference

Responses to the survey will be analysed and summarized. The future program will be modelled (partly) according to these responses (see also Term of reference 3).

Term of reference 3

> Conduct on-site trainings in countries mostly in need of IQC and EQA support

List 2023 accomplishments for this Term of Reference

Analysis of the monthly EQA performance data showed that Zambia, Malawi, Peru, Colombia were performing with low acceptance rates. The TF-GLQ decided therefore to conduct 2-day on-site trainings for each of these countries. Two teams were dispatched, one for the two African countries and the other one for the two Latin American countries.

The on-site trainings were conducted in October 2023 (Malawi, Zambia) and in November 2023 (Colombia, Peru). All countries expressed satisfaction with the training events.

Detailed reports were issued to participating countries and the IFCC EB.

List planned activities in 2024 for this Term of Reference

Organize webinars, theoretical and practical courses, workshops on internal and external quality applications for the laboratories where they are not applied.

Term of reference 4

> In depth analysis of performance characteristics of individual labs and countries

List 2023 accomplishments for this Term of Reference

There is a wealth of data which has accumulated during the 2-years pilot phase for the initial 50 labs (until 2022) and 100 labs (in 2023). The TF-GLQ is currently analysing the data and plans to publish the findings for informing a wider audience.

List planned activities in 2024 for this Term of Reference

The analysis is currently ongoing and should result in publication in 2024.





4. ADDITIONAL INFORMATION

- The TF-GLQ should not rule out the possibility of continuing the provision of EQA materials for those labs where EQA applications are not applied, if chances for “free-of charge” materials by vendors will appear (in this case, consultation with the IFCC EB will be sought).
- TF-GLQ cooperates with EQALM. G. Henriksen was nominated by EQALM to serve as liaison manager between EQALM and TF-GLQ in 2023 and beyond.
- Sarah Wheeler and Kandy Cendejas (Corp. representative) resigned from TF-GLQ due to other professional priorities. The TF-GLQ wants to thank Sarah and Kandy for their devoted work and important contributions.
- Anna Carobene was selected as successor of Sarah Wheeler and started her work with TF-GLQ in March 2024.
- Pradeep Kuma Dabla had to resign in April 2024 due to IFCC’s policy to not allow two seats. He is now a member of SD-EC.

5. 2023 MEETINGS / CONFERENCE CALLS HELD (VIRTUAL & IN PERSON)

Virtual:

January 26,
March 02,
March 29,
June 29,
July 31,
August 24,
September 09,
November 02.
December 12

In person:

May 24 (IFCC World Lab Rome)

Numerous individual ZOOM calls (e.g., with EQALM, IFCC president, etc).

6. MEETING SCHEDULE IN 2024

Virtual:

January 25,
February 15,
March 21,
April 25
Monthly thereafter

In person:

May 26 (IFCC World Lab Dubai)

7. PUBLICATIONS/CONFERENCE PRESENTATIONS/WEBINARS

Blasutig IM, Wheeler SE, Bais R, Dabla PK, Lin J, Perret-Liaudet A, Thomas A, Cendejas KA, Giannoli JM, Vassault A, Amann E, Meng QH. External quality assessment practices in medical laboratories: an IFCC global survey of member societies. Clin Chem Lab Med. 2023 Feb 13;61(8):1404-1410.

Wheeler SE, Blasutig IM, Dabla PK, Giannoli JM, Vassault A, Lin J, Cendejas KA, Perret-Liaudet A, Bais R, Thomas A, Amann EP, Meng QH. Quality standards and internal quality control practices in medical laboratories: an IFCC global survey of member societies. Clin Chem Lab Med. 2023 Jun 19;61(12):2094-2101.

IFCC TF-GLQ Workshop: Adding Value to Patient Care through Quality Assurance. November 30-December 1, 2023, Bogota, Columbia & November 27& 28, 2023, Lima, Peru

Qing Meng:

- Improving Global Laboratory Quality: IFCC Task Force on Global Lab Quality (TF-GLQ)
- Quality Control Fundamentals: Material Selection and Goal Setting
- Quality Control Fundamentals: Monitoring and Troubleshooting

Ivan Blasutig:

- Quality Control Practical Exercises: Case Studies

Ivan Blasutig, Dr. Sarah Wheeler:

- Quality Control
- Group exercise: What are major hurdles?
- Approaches to Quality Management (six sigma, risk management)

Sarah Wheeler:

- Principles of External Quality Assessment

Annette Thomas:

- EQA Interpretation and Types of Errors
- EQA Group Exercise

Qing Meng, Ivan Blasutig:

- Laboratory Accreditation: Current Situation in North America

IFCC TF-GLQ Workshop: Assuring Quality in the Clinical Laboratory. October 26-27, 2023, Lilongwe, Malawi & October 23-24, 2023, Lusaka, Zambia.

Egon Amann:

- Enhancing laboratory quality on a global level: Results of the IFCC EQA pilot study.
- Impulse lecture: Compliance with Quality Systems
- Moving along the road to accreditation

Egon Amann, Team:

- Group exercise/workshop “What is the best strategy to achieve compliance with QMS-and QC-related requirements in the clinical laboratory?”



Armand Perret-Liaudet:

- IQC topics
- Examples: Standardization of laboratory tests – Why is it needed and how to do it?

Renze Bais:

- Using EQA to improve laboratory performance
- EQA experiences with other countries

Rajiv Erasmus:

- The challenges of maintaining and sustaining EQA programs in Africa – lessons from the field
- POC and EQA

Egon Amann, Qing Meng, TF-GLQ Co-Chairs

Task Force on Global eLearning/eAcademy (TF-GEL)

2. CHAIR & MEMBERSHIP/TERMS OF OFFICE

Name	Position	Country	Term	Time in Office
A. Park	Chair	UK	2 nd	2024 01 - 2026 12
H. Can Çubukçu	Member	TR	2 nd	2024 01 - 2026 12
L. Langman	Member	US	2 nd	2024 01 - 2026 12
P. Mitra	Member	IN	2 nd	2024 01 - 2026 12
N. Tabatadze	Member	GE	2 nd	2024 01 - 2026 12

3. TERMS OF REFERENCE

Reporting instructions for Terms of Reference for all Committees, Taskforces and Working Groups, please provide the following information

Term of reference 1

List 2023 accomplishments for this Term of Reference

Prepare initial terms of reference for a new taskforce on global eLearning/eAcademy

The eAcademy platform has been updated to include all webinar presentations and issue certificates of participation upon webinar completion.

In the eAcademy there are present 4 different categories: Webinars, Pearls, IFCC VLP lectures and podcasts.

<https://eacademy.ifcc.org/>

List planned activities in 2024 for this Term of Reference

Prepare initial terms of reference for a new taskforce on global eLearning/eAcademy

Organize webinars twice a month, create new online courses, certificate programs, practical workshops, and tutorials delivered through Workcast and eAcademy.

Term of reference 2

List 2023 accomplishments for this Term of Reference

Recruit Webinar Coordinator(s) with relevant technical and scientific expertise

Three webinar coordinators were selected for the first term in office (2021 01 – 2023 12) for three different areas:

Asia Pacific area

Latin/North America area

Europe and Africa area

List planned activities in 2024 for this Term of Reference

Recruit Webinar Coordinator(s) with relevant technical and scientific expertise

Two webinar coordinators for the areas of Latin/North America and Europe and Africa were confirmed for the second term in office (2024 01 – 2026 12) and one new webinar coordinator for the area of Asia Pacific was selected.

Term of reference 3

List 2023 accomplishments for this Term of Reference

Initiate Live Monthly Webinars starting in January 2021, broadcast globally across different time zones, with each webinar consisting of a panel of 2-3 speakers and panel discussion

The TF-GEL has organized 23 webinars featuring 70 speakers from around the globe.

Each webinar consists of three presentations, each lasting 20 minutes, followed by a 20-minute panel discussion at the end. Additionally, there is a 10-minute introduction by the webinar chair to introduce the webinar and speakers, totalling 90 minutes.

The webinars are conducted live and later published on demand, ensuring accessibility for attendees at any time.

Following each webinar, a certificate of participation is provided to attendees.

List planned activities in 2024 for this Term of Reference

Initiate Live Monthly Webinars starting in January 2021, broadcast globally across different time zones, with each webinar consisting of a panel of 2-3 speakers and panel discussion

24 webinar proposals have been confirmed for 2024. They will be conducted twice a month, employing the same methodology.

Term of reference 4

List 2023 accomplishments for this Term of Reference

Initiate development of recorded webinars for publication on the eAcademy platform

All webinars are made available on demand through the WorkCast platform, with each presentation also being published on the eAcademy platform.

List planned activities in 2024 for this Term of Reference:

Initiate development of recorded webinars for publication on the eAcademy platform

The webinars will continue to be made available on demand through WorkCast and the eAcademy platform.



Term of reference 5

List 2023 accomplishments for this Term of Reference

Create new online courses, certificate programs, practical workshops, and tutorials delivered through Workcast or eAcademy

An email has been sent to all the chairs of the IFCC Functional Units to contribute to the development of educational material for the website.

The aim is to follow the IFCC curriculum and develop the online courses relevant to the field of expertise from the different IFCC Division / Committee / Task Force / Working Group experts.

List planned activities in 2024 for this Term of Reference:

Create new online courses, certificate programs, practical workshops, and tutorials delivered through Workcast or eAcademy

There have been received some lectures that need to be reviewed and a reminder email has been sent.

5. 2023 MEETINGS / CONFERENCE CALLS HELD (VIRTUAL & IN PERSON)

Six Zoom meetings were held, along with one in-person meeting in Rome during WorldLab/ EuroMedLab 2023.

6. MEETING SCHEDULE IN 2024

The in person meeting will be held on 28th May 2024, during WorldLab 2024 Congress in Dubai and virtual meetings will be held monthly or bimonthly.

7. PUBLICATIONS/CONFERENCE PRESENTATIONS/WEBINARS

In 2023, 23 webinars were held. The webinars presented until now had between 2500–5000 attendees each from more than 160 countries around the world.



ADDITIONAL INFORMATION

We need support from the EB in generation of course material. We have approached the functional units of the IFCC for course material and have sent out a letter (appended at the end of the letter): so far, we have had in response to this letter a proposal from one functional group only.

Adrian Park TF-GEL Chair

Task Force on Outcome Studies in Laboratory Medicine (TF-OSLM)

2. CHAIR & MEMBERSHIP/TERMS OF OFFICE

Name	Position	Country	Term	Time in Office
Z. Zhao	Chair	US	1 st	2021 10 - 2024 12
M. A. Serdar	Member	TR	1 st	2021 10 - 2024 12
C.I. Suárez Sánchez	Member	CL	1 st	2021 10 - 2024 12
V. Gounden	Member	ZA	1 st	2021 10 - 2024 12
E. Koldberg Amundsen	Member	NO	1 st	2021 10 - 2024 12
E. M. Simbaqueba Sánchez	Corp. Rep./IL-Werfen	US	1 st	2021 10 - 2024 12
J. A. Snyder	Corp. Rep./Siemens	US	1 st	2021 10 - 2024 12
C. Strain	Member	CA	1 st	2021 10 - 2024 12

List of Corresponding Members, nominated by National Societies

Name	Full and Affiliate Member Societies
K. Rodriguez-Capote	Canadian Society of Clinical Chemists (CSCC)
M. Banerjee	Association of Clinical Biochemists of India (ACBI)
M.M.Suchitra	Association of Medical Biochemists of India (AMBI)
M. Wakui	Japan Society of Clinical Chemistry (JSCC)
V. Pant	Nepalese Association for Clinical Chemistry (NACC)
R. I. Álvarez Carrasco	Asociación Médica Peruana de Patología Clínica (AMPPC)

3. TERMS OF REFERENCE

Reporting instructions for Terms of Reference for all Committees, Taskforces and Working Groups, please provide the following information

Term of reference 1

List 2023 accomplishments for this Term of Reference

- 1. Develop a funded research program:** The “call for study proposals seeking research proposals for studies evaluating the impact of laboratory testing on health outcomes” was released in August, 2023. A total of 34 applications were submitted and one proposal was selected to provide funding for the study. The feedback from at least 2 (up to 6) reviewers has been sent to each applicant to provide evaluation comments. The draft contract agreement has been sent to the PI of the selected study. For the five studies selected from the 2022 call for proposals, all five teams have submitted the 6 months progress reports.
- 2. Search Evidence for Outcome Studies in Laboratory Medicine and Create a repository/database of publications that is accessible by members of IFCC:**

In December 2023, the IFCC was excited to launch the "Database of Outcome Studies in Laboratory Medicine" developed by our Task Force through the efforts in the past two years. This database is a dedicated resource for highlighting the critical role of laboratory medicine in healthcare. Created for IFCC members and stakeholders globally, we hope that this free database become a valuable tool for supporting research, education, and policy development in healthcare.

The database is an expansive Knowledge Resource, featuring a diverse collection of outcome studies related to laboratory medicine, currently including more than 1000 publications in different areas. This database includes a broad spectrum of articles, each is carefully reviewed by one of the taskforce members. The publications are sorted by their study design and reported outcomes. The study designs range from randomized controlled trials (RCTs) and cluster RCTs to observational studies and modeling. Additionally, we've incorporated meta-analyses, systematic reviews, and guidelines. The outcomes span various domains, including changes in patient management, clinical outcomes, economic impacts, operational efficiencies, patient-centeredness, safety, and influence on policymaking. There are also a range of projects covering various medical domains such as antibiotic guidance, cancer, COVID-19, cardiovascular disease, diabetes, HIV, and newborn screening, among others.

Database weblink: <https://oslm.ifcc.org>

IFCC eNEWS: <https://ifcc.org/ifcc-news/archive/2023/the-ifcc-launches-the-database-of-outcome-studies-in-laboratory-medicine/>

IFCC weblink: <https://ifcc.org/resources-downloads/database-of-outcome-studies-in-laboratory-medicine/>

3. Develop publications, presentations, webinars and other communications materials to help IFCC members use this data to effectively promote the critical value of laboratory medicine in healthcare to key stakeholders.
1. List of outcome studies related publications:

Home > Journal of General Internal Medicine > Article

Improved Utilization of Serial Testing Without Increased Admissions after Implementation of High-Sensitivity Troponin I: a Controlled Retrospective Cohort Study

Original Research | Published: 22 November 2023

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JOURNAL ARTICLE

Linking Laboratory Testing to Clinical Outcomes: Bridging the Gap through Outcome-Based Studies in Laboratory Medicine

Verena Gounden, Mithu Banerjee, Erik Koldberg Amundsen, Muhtitin A Sendar, Claudio Iván Suárez Sánchez, Colleen Spain, David Kinniburgh, Zhen Zhao on behalf of the IFCC Task Force on Outcome Studies in Laboratory Medicine

Clinical Chemistry, Volume 68, Issue 11, November 2023, Pages 1317-1323, <https://doi.org/10.1093/clinchem/hvad132>

Published: 09 September 2023 Article history

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2. Outcome study related presentations/webinars in international conferences:
 - “Unique Roles of Clinical Laboratorians in Translational Research”, March 2022, Canadian Society for Medical Laboratory Science, Canada
 - “Unsung Heroes Working Behind the Scene: The Role of Laboratory Medicine on Healthcare Outcomes”, Plenary lecture at Shanghai International Forum of Laboratory Medicine, September 2022, Shanghai, China
 - “IFCC Task Force on Outcome Studies in Laboratory Medicine”, The International Federation of Clinical Chemistry and Laboratory Medicine 2022 General Conference, October 2022, Brussels, Belgium
 - “Impact of clinical laboratory in clinical medicine: developing the evidence”, 2023 Worldlab Euromedlab, May 2023, Rome, Italy
 - “Outcome studies in laboratory medicine”, 2023 Sino-American Pharmaceutical Professionals Association annual meeting, September 2023, New Brunswick, NJ
 - “Linking laboratory testing to clinical outcomes”, International Congress on Quality in Laboratory Medicine and Health Technology, February 2024, Helsinki, Finland



List planned activities in 2024 for this Term of Reference.

1. Symposium proposals:
 - Symposium proposal for ADLM (formerly AACC) 2024 Annual Scientific Meeting, July 30- August 1, 2024.
 - Symposium proposal for COLABIOCLI Regional Federation Congress in Cartagena, Colombia, from October 3-6, 2024.
 - Speakers: David Grenache, PhD, Allan Jaffe, MD, Zhen Zhao, PhD, Mari DeMarco, PhD,
 - Title: Moving Beyond Sensitivity and Specificity: Showing the Value of Lab Medicine Through Outcome Measures

Submitted by IFCC Task Force on Outcome Studies in Laboratory Medicine
in collaboration with ADLM (formerly AACC) Value of Lab Medicine Steering Committee

2. Database: continue on adding more articles into the database
3. Develop a funded research program: plan to release a new round of “call for study proposal” with more structured and focused approach. For example, to identify areas of interests and experts to formulate the study design and study sites.
4. In person TF meeting: IFCC WorldLab 2024, Dubai
5. Develop course material in collaboration with IFCC Evidence-based Laboratory medicine Committee



4. ADDITIONAL INFORMATION

Two taskforce members Dr. Coleen Strain and Dr. Claudio Iván Suárez Sánchez have resigned from the taskforce due to the other work related commitment. The taskforce has announced two member openings.

5. 2023 MEETINGS / CONFERENCE CALLS HELD (VIRTUAL & IN PERSON)

The Task Force OSLM has been managing to have monthly virtual meetings and one in-person meeting per year to have always feedback and updates among the members for a more linear and successful work.

In 2023 we had eight virtual meetings and one in-person meeting during the WorldLab / EuroMedLab Congress in Rome on the 21st May, 2023.

6. MEETING SCHEDULE IN 2024

For 2024 the meetings have maintained the monthly/bi-monthly schedule.

The first meeting in 2024 has been held on January 8th and the next meeting has been scheduled on March 4th.

The Task Force has also organized an in-person meeting during the WorldLab in Dubai on the 26st May, 2024.


7. PUBLICATIONS/CONFERENCE PRESENTATIONS/WEBINARS

1. Taş D, Kurgan Ş, Güney Z, Serdar MA, Tatakis DN. The effect of smoking on clinical and biochemical early healing outcomes of coronally advanced flap with connective tissue graft: Prospective cohort study. *Journal of Periodontology*. 2023;17–28.
2. Yurttutan Uyar N, Kerem Sayar A, Sesin Kocagöz A, Abdülkadir Serdar M, Zengin R, Tuğçe Sarıkaya Z, et al. Sepsis biomarkers for early diagnosis of bacteremia in emergency department. *Journal of Infection in Developing Countries*. 2023;17:832–9.
3. Kaya ZZ, Serdar M, Aksungar F, Kilercik M, Serteser M, Baykal AT. Rapid detection of serum free light chains by matrix-assisted laser desorption/ionization time-of-flight mass spectrometry. *European Journal of Mass Spectrometry*. 2023;29:132–40.
4. Ayan E, DeMirci H, Serdar MA, Palermo F, Baykal AT. Bridging the Gap between Gut Microbiota and Alzheimer’s Disease: A Metaproteomic Approach for Biomarker Discovery in Transgenic Mice. *International Journal of Molecular Sciences*. 2023;24.
5. Yurt EF, Biçer C, Serdar MA, Akan S, Erten Ş. Accelerated kynurenine pathway down regulates immune activation in patients with axial spondyloarthritis. *Cytokine*. 2023;169.

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27. "Impact of clinical laboratory in clinical medicine: developing the evidence", 2023 Worldlab Euromedlab, May 2023, Rome, Italy
28. "Outcome studies in laboratory medicine", 2023 Sino-American Pharmaceutical Professionals Association annual meeting, September 2023, New Brunswick, NJ

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29. “Quantifying the Advantage of Laboratory Medicine: Evidence from Clinical Outcomes”, IFCC Webinar, December 2023
 30. “Linking laboratory testing to clinical outcomes”, International Congress on Quality in Laboratory Medicine and Health Technology, February 2024, Helsinki, Finland
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Zhen Zhao, TF-OSLM Chair

Task Force on Global Reference Interval Database (TF-GRID)

No report received

Task Force on Environmental Impact of Laboratory Medicine (TF-EILM)

The IFCC Task Force on Environmental Impact of Laboratory Medicine (TF-EILM) is one of the youngest functional units of IFCC. It was established in the first quarter of 2023.

Background

The taskforce is largely an extension of the United Nation sustainability program to conserve and protect Planet earth, which is facing threat due to unguided growth scientific and industrial activities. These are responsible for the current greatest concern of the global scientific community; climate change including global warming.

This task force focuses on the clinical chemistry and laboratory medicine contribution to environmental disorders. The driving principle of the laboratory medicine approach is hinged on the concept of Green Chemistry. This implies the application of innovative scientific solutions to address environmental issues in the laboratory.

The concept of Green Chemistry was first introduced by Paul Anastas and John Warner in 1998. They introduced the 12 principles of Green Chemistry, which are essentially divided into 2 groups ‘Reducing Risk’ and ‘Minimizing Environmental Footprint’.

The latter of which includes the reduction of the quantity of chemicals in waste and the toxicity of these substances as well as improve production efficiency and decrease resource use and green gas (mainly CO₂) emissions, enhance safety and economic as well as the social aspects of chemicals.

The broad aim of Green Chemistry is to reduce chemical-related impact on human health and ‘virtually eliminate contamination of the environment through dedicated, sustainable prevention programs. Green Chemistry also involves searching for alternative environmentally less deleterious chemicals.

It is recognized that all human activities, including activities in the laboratory medicine community have an impact on the environment. Though the laboratory medicine community



had paid little attention to its contribution to environmental footprint, it is now evident that it was a huge oversight, as laboratory medicine practices involve huge energy consumption (5-10 times normal office consumption) and attendant large CO₂ (green gas) generation, including consumption of large quantities of water as well as generation of a great quantity of hazardous waste. Thus the field of laboratory is an important contributor to environmental degradation and associated consequences.

This gap was recently recognized by the International Federation of Clinical Chemistry and Laboratory (IFCC) and responded aptly by setting up this specific task force, the Task Force on Environmental Impact of Laboratory Medicine (TF- EILM) to address the problem.

The task force is made up of 5 members representing all the continents of the world and 3 representing key interest groups. There are also 5 corresponding (associate) members and IFCC liaison.

Administrative Structure

At the beginning in 2023 Prof. Tony Badrick (AU) was Chair while John Anetor (NG) was Secretary and Guzin AyKal (TR) was Co-Secretary

Activities So Far

The task force has 5 mandates or terms of reference (TOR), which the TF is working hard to accomplish with steady progress. The TF has had virtual meetings monthly on the average to execute its mandate. At the beginning it recognized the pioneering role of EFLM and the benefit of collaborating with her by signing an MoU, discussions are still in progress, but the TF is encouraged that this will be resolved soon as the current IFCC President was the Chair of the EFLM Task Force- Green Labs and an arrow head in the global drive to enthrone sustainability in laboratory medicine Worldwide.

Some existing recourses (publications) have been identified that may facilitate the work of the task force, some requiring prior permission before use.

MoU with IATDMCT

Early in the business of the TF it was identified that it had important relationship with the Environmental Toxicology Committee of the International Association of Therapeutic Drug Monitoring and Clinical Toxicology (IATDMCT) and that IFCC had a preexisting MoU with IATDMCT, a meeting was held with the Chair of the IATDMCT Environmental committee and another representative; it was found that the existing MoU does not adequately capture the mandate of TF-EILM and there is need for a revised one.

Global Survey on the Baseline of EILM

A major achievement of the TF in 2023 was that it decided to carry out a survey on the current situation worldwide; met several times to draw a questionnaire, a 25-point questionnaire ultimately arrived at about the end of 2023, sent to national societies and responses have started arriving.

A major thrust of the survey is to try and identify if differentials exist between advanced and developing countries as it is perceived that their needs may be development related.

This survey when fully analyzed has great potential to drive the execution of the mandates of the TF.

It will also be helpful in coming up with guidelines for the laboratory medicine community.

Future Plans / Next Steps

A major activity for 2024 is to analyze the data received so far and use it for decision making.

It is planned to have at least 2 webinars on the mandate and significance of the TF.

A symposium was planned for 2024 but were told is premature.

A number of educational programs to educate and train national societies is in progress and will be concluded at the physical meeting at the IFCC Congress in Dubai.

Guide national societies on the implications and approach to calculation of carbon footprint.

The TF plans to make presentations by way of lectures or workshops to promote sustainability (Green Labs) in laboratory medicine practice at regional congresses and meetings.

Potentials

The activities of the TF has great potentials to transform laboratory medicine practice all over the world, by encouraging responsible test request, promoting reduced energy and water consumption without reducing the quality of service provided, reduce chemical waste generation, and encourage recycling or substitution of chemicals where appropriate.

The TF also has great potential of reducing plastic pollution.

Ultimately the TF- has the potential to contribute to a healthier Planetary earth through all the above activities making the world a safer and healthier place thus identifying with the UN SDGs.

If well implemented the guidelines to be proposed by the TF promises some economic benefits on the long run.

Conclusion

The IFCC TF-EILM though coming up late is essential part of the global scientific community to promote Planetary health by adopting the principles of green chemistry in laboratory medicine practice across the globe.

Though in its early days, it has great potentials to contribute substantially to sustainability by reducing risk of climate change including global warming and making the world more healthy and safer.

*Tony Badrick, TF-EFLM Chair, John I. Anetor, incoming Chair
and Guzin Aykal, TF-EILM co- Secretary*

FOUNDATION FOR EMERGING NATIONS



The activities of the FEN were again restricted by the dual challenge of finding hosts for scholarship recipients in the post-pandemic world and diminishing funds. One scholarship recipient from Indonesia was able to undertake her training visit to a specialist laboratory and the host laboratory.

The FEN Board:

- Approved the annual report and accounts for 2023
- Achieved tax exemption from the Swiss Regulatory Authority

The Board recognizes that the purposes of FEN were increasingly difficult to achieve and recommended a move towards closure as the assets of the Foundation are run down.

The Board acknowledges the excellent support of Paola Bramati.

Graham Beastall FEN Chair



REGIONAL FEDERATIONS

REGIONAL FEDERATIONS AFFILIATED WITH IFCC

There are six main Regional Professional Laboratory Medicine organizations which can be considered IFCC regional partners:

- AFCB - Arab Federation of Clinical Biochemistry
- AFCC - African Federation of Clinical Chemistry
- APFCB - Asia-Pacific federation of Clinical Biochemistry
- COLABIOCLI - Latin-American Confederation of Clinical Biochemistry
- EFLM - European Federation Clinical Chemistry and Laboratory Medicine
- NAFCC – North American Federation of Clinical Chemistry and Laboratory Medicine

AFCB

Arab Federation of Clinical Biology



The AFCB is growing rapidly, and the Kingdom of Saudi Arabia, our newest member, is hosting the IFCC WorldLab 2024 in Dubai. We eagerly anticipate welcoming other countries and look forward to more applications in the future.

Despite the current political context, the AFCB has experienced a significant resurgence in activity. Numerous events have taken place, and exchanges have been concluded among the different member countries. Student exchanges to prestigious universities and online training programs have been shared, while memorandums of understanding have been signed to enhance communication and mutual benefit among member states.

Stakeholders have exchanged views on cutting-edge topics, emphasizing the future of young scientists, with the firm belief that this is crucial for the field of laboratory medicine.

We have worked diligently, especially in member countries directly affected by wars or hosting migrants, to address their needs in managing the influx of migrants, their illnesses, and their general healthcare needs. Our primary concern has long been to serve where the need is most acute.

On the scientific front, AFCB members have been highly active, organizing numerous significant scientific events that have attracted a large participation from countries around the world. Cooperation agreements with international societies, notably the EFLM and the FIFBCML, have been signed.

We have received activity reports from six AFCB member societies (ALAM, SDBLB, PMTA, SSCC, STBC, SCLA), which indicate a robust engagement in advancing the field of laboratory medicine, and we share them here after.

Reports of below listed societies are listed in the specific section.

LEBANON: Syndicat des Biologistes du Liban/Lebanese Syndicate of Clinical Biologists (SDBLB)

MOROCCO: Société Marocaine de Chimie Clinique / Moroccan Society of Clinical Chemistry and Laboratory Medicine (SMCC)

SAUDI ARABIA: Saudi Society for Clinical Chemistry (SSCC)

SYRIA: Syrian Clinical Laboratory Association (SCLA)

TUNISIA: Société Tunisienne de Biologie Clinique / Tunisian Society of Clinical Biology (STBC)



Osama Najjar, President

AFCC

African Federation of Clinical Chemistry



1.0 Introduction

The African Federation of Clinical Chemistry (AFCC) is a regional federation of the International Federation of Clinical Chemistry and Laboratory Medicine (IFCC) that was inaugurated in Ibadan, Nigeria in 2009. The federation aims to promote improvement in the health and well-being of the communities it serves through improving the development and practice of clinical chemistry through education and scientific excellence. Member societies are defined by geographic location. Thus, fifteen national societies (13 full and 2 affiliate) constitute the membership of the federation.

1.1 Membership

1. Algeria: Société Algérienne de Biologie Clinique (SABC)
2. Botswana: Botswana Institute of Clinical Botswana: Laboratory Professionals (BICLP) (affiliate member)
3. Egypt: Egyptian Society of Clinical Chemistry and Clinical Laboratory Sciences (ESCC)
4. Egyptian Association of Health Care Quality and Patient Safety (EAHCQPS) (affiliate member)
5. Ethiopia: Ethiopian Medical Laboratory Association (EMLA)
6. Kenya: Kenyan Association of Clinical Chemistry (KACC)
7. Malawi: Malawi Association of Medical Laboratory Scientists (MAMLS)
8. Morocco: Societe Marocaine de Chimie Clinique (SMCC)
9. Nigeria: Association of Clinical Chemists of Nigeria (ACCN)
10. Rwanda: Rwanda Society of Pathologists (RSP)
11. South Africa: South African Association of Clinical Biochemistry (SAACB)
12. Sudan: Sudanese Association of Clinical Biology (SACB)
13. Tunisia: Societe Tunisienne de Biologie Clinique (STBC)
14. Zambia: Biomedical Society of Zambia (BSZ) in Zambia
15. Zimbabwe Association of Clinical Biochemists (ZACB).

Five societies: Algeria (SABC), Egypt (ESCC), Rwanda (RSP), Sudan (SACB) and Tunisia (STBC) had not been involved in the activities of AFCC.

2.0 New Leadership

A new leadership of the AFCC started in January, 2023 for 2 years (2023-24) with Dr. Mabel A. Charles-Davies as President having been President-Elect during the last tenure. Unfortunately, the election of the new executive board (AFCC EB) could not take place so the Past President-Rajiv Erasmus and she were the only board members.

2.0 Objectives of the AFCC Executive Board

- i. To complete the outstanding projects of the past tenure.
- ii. To sustain the activities of the past tenure.
- iii. To advance the cause of the AFCC on the African Continent.



2.1 Objective I: To complete the outstanding projects of the past tenure

- a. The first agenda of the new board was to elect members into elective positions and an election committee was set up.

2.1.1 AFCC Election Committee

Members of the election committee were:

Vanessa Steenkamp (Pioneer AFCC President)-**Chairperson**

Josephine A. Onakoya (Immediate Past AFCC Treasurer)

Elizabeth Odera (Pioneer AFCC Treasurer).

2.1.2 Nomination and Election of Candidates

The nomination of candidates for various positions on the board took place during the previous tenure and names were handed over to the election committee by the outgoing Secretary, Dr. Hilary Lumano. Every society (active) was given the opportunity of nominating their members for elective positions. The positions of the Secretary, Treasurer and the two members-at-large were returned unopposed. Nine National Representatives- Zambia, Nigeria, Ethiopia, South Africa, Zimbabwe, Malawi, Botswana, Kenya and Morocco participated in the election of the candidate for the position of President-Elect, which had two nominations.

2.1.3 AFCC Executive Board (AFCC EB)

The new AFCC EB was inaugurated during the Worldlab in Rome by the President of the IFCC, Prof. Khosrow Adeli on 23 May, 2023 in Rome, following the announcement of the election results on 12 May, 2023. The members of the AFCC EB are:

President: **Mabel A. Charles-Davies**

Past President/Incoming AFCC Representative in IFCC EB: **Rajiv Erasmus**

Outgoing AFCC Representative on IFCC EB/Incoming Secretary: **Adekunle B.Okesina**

President- Elect: **Gizachew Akalu**

Treasurer: **Hilary Lumano**

Member- at-large: **Badre Eddine**

Member-at-large: **Joseph Ahaneku**

Prof. A.B. Okesina ended his tenure on the IFCC EB in 2023. The AFCC is grateful to him for good representation. Rajiv Erasmus took over the mantle from him and is welcome to represent the AFCC on the IFCC EB from 2024-2026. The previous AFCC EB headed by Prof. Rajiv Erasmus is well appreciated for moving the AFCC to great heights.

2.2 Objective II: To sustain the activities of the past tenure

- a. **Membership Drive:** The AFCC has a mandate to incorporate National Societies/ Associations of Clinical Chemistry from the entire continent of Africa. No new society joined the federation during the period under review. However, some countries- Namibia and Ghana expressed interest to join the AFCC. Namibia was advised take an initial step to join the SAACB because of proximity and few members.
- a. **AFCC Committees:** There are four AFCC committees.
 - a. Point of Care testing with Prof. Rajiv Erasmus as Chair
 - b. Education & Training with Dr. Gizachew Akalu as Chair

- c. Standardisation & Traceability with Prof. J.I Anetor as Chair
- d. Young Scientists Forum with Prof. Aslin Rampul as President

b. International and Regional Congresses:

The AFCC participated actively in the IFCC Worldlab-EuroMedlab 2023, which took place from 21-25 May 2023 at Congress Center, La Nuvola (Roma Convention Center Viale Asia 49/4400144 Rome. Other congresses held in Botswana in April, Nigeria in October, and Zambia in December. AFCC was also involved in a webinar on Laboratory Logistics hosted by the University of Harare on 28 July, 2023 (with 650 registrations). These outings were successful.

c. AFCC Financial support

1. AFCC Young Scientists Travel Grant

A Travel Grant Committee was set up to nominate qualified YS for AFCC travel grant covering travel and accommodation of maximum of \$1500 to 2023

Euromedlab/World lab in Rome. The members were:

Prof. A.B. Okesina-Chairman

Prof. Rajiv Erasmus

Prof. J.I. Anetor

The awardees were from Kenya, Nigeria and South Africa. These were the only countries that sent applications to the Chair of the Committee. Although five were awarded, only three could attend the congress and were duly reimbursed by the IFCC. The exposure of these individuals to the international community is worthwhile.

2. Travel Grant for the President of AFCC

All board members that were not supported by the IFCC were eligible for AFCC Travel Grant to enable them attend the inauguration and meetings of the AFCC board/Council, which took place on 23 May, 2023 in Rome during the Worldlab Congress. However, only the AFCC President benefitted as other eligible board members could not attend. The registration fee could not be paid because of the dormancy of the AFCC account.

3. AFCC Support to Member Countries

Young Scientists from Botswana, Nigeria and Zambia benefitted from the registration waiver and/or Travel grant for YS in the respective societies and federation to attend Congresses within their countries. However, the registration waiver was not claimed by Botswana although the invited speaker from the AFCC has been reimbursed.

4. AFCC Board/Council Meetings

AFCC Board and Council meetings took place after the inauguration of the new board on 23 May, 2023 in Meeting Room 2, Hotel Hilton, Via Europa, 287 00144 Roma RM. Other meetings held via zoom and related platforms.

5. AFCC ACCOUNT

The AFCC Account is domiciled in South Africa. The Board decided at its inaugural meeting that the Past President and Treasurer should operate the account until formal hand over was complete. However, the account was deactivated and not operational for most part of the year. Thus, no fund was withdrawn from the account.



6. EQA Training Programmes

Two countries-Zambia and Malawi, benefitted from the EQA Training programmes organised by the IFCC under the leadership of Prof. Egon Amman.

3.0. Objective III: To advance the cause of the AFCC on the African Continent

a. AFCC Session in Forthcoming Worldlab in Dubai, UAE from 26-30 May, 2024.

AFCC will participate at her Session on Inborn Errors of Metabolism. Four Speaker-Prof. A. B. Okesina-Chair, Dr.G.T. Akalu, Prof. J.I. Anetor and Prof. R.T. Erasmus will be speaking to interesting topics.

b. 2024 AFCC Congress

The 2024 AFCC Congress fixed initially for 25-26 January, 2024 was postponed to 28-29 February, 2024.

c. AFCC Fund Generation

As part of the fund driving effort by the AFCC, 10% of profit of Congresses supported by the AFCC has not been agreed on.

d. AFCC Collaboration

AFCC is in collaboration with ASLM, Celebrate Lab West Africa and was invited by Wondfo to participate at a webinar.

e. AFCC Website

The activation of the AFCC website was contracted to its original designer but his performance was not satisfactory.

f. AFCC Secretariat

Despite discussions on the AFCC Secretariat, there is still no Secretariat.

g. Strategic Plan

This has not been concluded.

h. Constitution Review

The constitution in use was written at the inauguration of the Federation, when there were 3 member societies. With 15 member societies after 14 years of existence, it is appropriate to update the constitution to accommodate unforeseen elements and clarification of controversial segments. A committee will be set up in this regard.

g. 2024 Elections

An election committee will also be constituted to conduct elections for 2025-2026 Executive Board.

i. Membership Drive and New Committees

The federation will ensure increase in membership and form additional committees to forge future paths for excellence in laboratory medicine in Africa.

Conclusion

The past, the now and the future of clinical chemistry and laboratory medicine are of interest to the federation. The collective contribution of all member societies, collaborating organisations,



industry and our parent body, the IFCC were keys to the progress observed in the Federation. Our invitation is extended to Corporate Organisations to join the federation to enhance good laboratory practice on the continent largely made up of emerging countries.

Acknowledgement

I wish to thank all board members and national societies and the IFCC for the immense support received. I also appreciate most sincerely the IFCC office for good communication and support

Mabel Charles Davies, President



APFCB

Asia-Pacific Federation of Clinical Biochemistry
and Laboratory Medicine



This is the first year of the new Executive Board (EB) and Committee Chairs, coinciding with a rebound in educational activities in the post-pandemic era.

The focus of Board activity in the first year has been improving internal processes and communication with the EB and the Chairs. Virtual Board/Chairs meetings have been held most months and two virtual Council meetings this year—a formal agreement with the AACB to provide secretariat services after expressing interest and evaluating responses. The Laboratory Management and Education committees were reinstated, and bank processes and an investment strategy were implemented.

The membership of the Executive Board and Committee chairs is given below. Dr Endang Hoyaranda formally became Past President after Dr Sunil Sethi resigned in September 2022 due to ill health.

APFCB Executive Board:

Dr Tony Badrick	President
Dra Endang Hoyaranda	Past President
Dr Sam Vasikaran	Vice President
Dr Praveen Sharma	Secretary
Dr Elina Raja	Treasurer
Mr Douglas Chung	Corporate Member representative

Chairs of APFCB Standing Committees

Dr Cui Wei	Chair, Education Committee
Dr Tian Sian Hwa	Chair, Lab Management Committee
Dr Woei Horng Fang	Chair, Congress and Conferences Committee
Dr Pradeep Dabla	Chair, Communications and Publications Committee
Dr Tze Ping Loh	Chair, Scientific Committee

Ordinary and Affiliate members showed no difference in numbers, but members' activity decreased during the past years. Some Corporate members were delisted due to non-responsiveness, but we are glad to see some new ones.

1. ORDINARY MEMBERS (in alphabetical order)

There were minor changes to the ordinary members during the year, with the loss of the TACB because of the organisation's inability to sustain itself during the pandemic. The pandemic may have also affected some members, causing inactivity and unresponsiveness during the year.

1. Australasian Association of Clinical Biochemists (AACB)
2. Association of Clinical Biochemists of India (ACBI)
3. Association for Clinical Biochemistry, Srilanka (ACBSL)
4. Chinese Association for Clinical Biochemistry, Taiwan (CACB)



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5. Chinese Society of Laboratory Medicine (CSLM)
 6. Hong Kong Society of Clinical Chemistry (HKSCC)
 7. Indonesian Association of Clinical Chemistry (IACC)
 8. Iranian Association of Clinical Laboratory Doctors (IACLD)
 9. Japan Society of Clinical Chemistry (JSCC)
 10. Korean Society of Clinical Chemistry (KSCC)
 11. Malaysian Association of Clinical Biochemistry (MACB)
 12. Mongolian Association of Health Laboratorians (MAHL)
 13. Nepal Association for Medical Laboratory Science (NAMLS)
 14. Pakistan Society of Clinical Pathologists (PSCP)
 15. Philippine Association of Medical Technologists (PAMET)
 16. Singapore Association of Clinical Biochemistry (SACB)
 17. Vietnamese Association of Clinical Biochemistry (VACB)

2. AFFILIATE MEMBERS (in alphabetical order)

There was no change on the affiliate membership list during 2022, although there were some non-responders

1. Association of Medical Biochemists of India (AMBI)
2. College of Chemical Pathologists of Srilanka (CCPSL)
3. Macao Laboratory Medicine Association (MLMA)
4. Nepalese Association of Clinical Chemistry (NACC)
5. Philippine Council for Quality Assurance in Clinical Laboratories (PCQACL)

3. CORPORATE MEMBERS (in alphabetical order)

1. Abbott Laboratories (Singapore) Pte Ltd.
2. Beckman Coulter Hong Kong Ltd.
3. Becton Dickinson Holdings Pte Ltd.
4. Bio-Rad Laboratories (Singapore) Pte Ltd.
5. DiaSys Diagnostic Systems GmbH
6. Greiner Bio-One Singapore Pte Ltd.
7. QuidelOrtho
8. RCPAQAP
9. Roche Diagnostics Asia Pacific Pte Ltd.
10. Sekisui Medical Co Ltd.
11. Shenzhen Mindray Bio-Medical Electronics Co, Ltd
12. Siemens Healthcare Pte Ltd.
13. Snibe Co., Ltd.
14. Sukraa Software Solution Pvt Ltd.

- 15. Sysmex Corporation
- 16. Thermo Fisher Scientific
- 17. Waters Pacific Pte Ltd.

The following are activities conducted by the committees:

LABORATORY MANAGEMENT COMMITTEE

Committee Chair	: Dr Tjan Sian Hwa
Member	: Dr Prasenjit Mitra (ACBI)
	Dr M Jamsani Mat Salleh (MACB)
	Dr Thyrza Darmadi (IACC)
	Dr Douglas Chung (Abbott Diagnostic)
	Mr Vincent Chen (Snibe)

2023 Activities :

- Sustainability Webinar in collaboration with IACC @ December 2023 supported by Abbott Diagnostic, hosting the topics of Steps to Sustainability by Dr Lia G Partakusuma, How can a Lab participate in sustainability efforts by Dr Tony Badrick and How to measure green Activities by Mr Jay Nam
- The next webinar is Preanalytical in collaboration with MACB

CONGRESS AND CONFERENCES COMMITTEE (C-CC)

Committee Chair	:Dr. Woei-horng Fang (Taiwan)
Member	: Mr. Ronaldo Puno (Philippines)
	Dr. Rajiv Ranjan Sinha (India)
	Dr. Mehrdad Vanaki (Iran)
	Ms. Sasha Duan (Mindray - Corporate Member)
	Mr. Fionn Quinlan (Waters - Corporate Member)

Activities

1. 17th APFCB Congress, Sydney, 31th Oct-3rd Nov 2024

The C-CC worked closely with Congress Organising Committee (COC) of the 17th APFCB Congress. The C-CC Chair and APFCB President met with the COC on 30th Oct 2023 for a site inspection of ICC Sydney, the congress venue, and to discuss the progress of preparations. The meeting was attended by Helen Martin, Chair of APFCB 2024; Tony Badrick, APFCB President and also Chair of the Scientific Organizing Committee; and other colleagues: Lisa King, Fernando San Gil, Ronda Greaves, Graham Jones from the COC. Also present were representatives from the professional conference organiser (ICMSA) of Emma Bowyer, Sofia Figuera Larete, and Rickie Xian. The meeting reviewed the preparation timeline, program update, budget plan, sponsorship, exhibition, and marketing. A report of the visit was prepared by Woei-horng Fang and submitted to the Executive Board.



2. APFCB auspices

One of the functions of the APFCB C-CC is the award of auspices of the APFCB for various scientific events like conferences, congresses, and events organized by regional society members and corporate members. The provision of auspices is mutually beneficial: the APFCB lends its prestige to a meeting, which should help attract greater participation, and in return, the APFCB benefits from greater name recognition among the participating laboratory scientists. All applications for APFCB auspices are evaluated by the C-CC and treated on a case-by-case basis efficiently and promptly. The C-CC is careful to award auspices only to scientific meetings that are organized by learned bodies and vendors such as APFCB corporate members where the content is of scientific and educational value. In 2023, the committee members evaluated and granted APFCB auspices to the following scientific events.

	Analyte	NIST Identifier	Release Date	Description
1	IFCC Visiting Lecture 2023 : Prof. Khosrow Adeli (IFCC President)	23-25 Mar 2023	Jakarta, Indonesia	Indonesian Association for Clinical Chemistry
2	Snibe Academic Conference on Immunology	1 Apr 2023	Indore, India	Snibe Co., Ltd.
3	Maglumi X Series: The Global IVD Pioneer	19 Apr 2023	Hong Kong	Snibe Co., Ltd.
4	New Progress in Research and Application of International Laboratory Medicine	22 Apr 2023	Shenzhen, China	Snibe Co., Ltd.
5	14 th International & 20 th National Congress on Quality Improvement in Clinical Laboratories	16-19 May 2023	Tehran, Iran	Iranian Association of Clinical Laboratory Doctors
6	Snibe Academic Conference on Immunoassay	24 Jun 2023	Delhi, India	Snibe Co., Ltd.
7	International Conference on Immunology	9 Jul 2023	Dubai	Snibe Co., Ltd.
8	Annual Academic sessions CCPSL 2023	14-15 Jul 2023	Kandy, Sri Lanka	College of Chemical Pathologists of Sri Lanka
9	International Symposium on Laboratory Medicine	26-27 Aug 2023	Shenzhen, China	Snibe Co., Ltd.
10	49 th Annual Conference of Association of Clinical Biochemists of India	14-16 Sep 2023	Thiruvalla, Kerala, India	Association of Clinical Biochemists of India
11	International Symposium on Laboratory Medicine	16 Sep 2023	Negombo, Sri Lanka	Snibe Co., Ltd.
12	Re-imagining Mass Spectrometry A Convergence of ideation, innovation and integration	5 Oct 2023	Yokohama, Japan	Roche Diagnostics Asia Pacific
13	International Symposium on Laboratory Medicine	29 Oct 2023	Shenzhen, China	Snibe Co., Ltd.
14	Roche Experience Days (RED) 2023 with virtual	8-9 Nov 2023	Seoul, South Korea	Roche Diagnostics Asia Pacific



	Analyte	NIST Identifier	Release Date	Description
15	International Symposium on Immunoassay	25 Nov 2023	Kathmandu, Nepal	Snibe Co., Ltd.
16	International Symposium on Immunoassay	9 Dec 2023	Colombo, Sri Lanka	Snibe Co., Ltd.
17	AMBICON 2023	13-16 Dec 2023	Navi Mumbai, India	Association of Medical Biochemists of India

The committee also worked on updating the Congresses and Conferences webpage of APFCB to include the details of the major scientific events that have been granted APFCB auspices.

SCIENTIFIC COMMITTEE

Committee Chair : Dr Tze Ping Loh

Members : Dr Tze Ping Loh, Chair of Harmonization of Reference Intervals WG
Dr Ronda Greaves, Chair of Mass Spectrometry Harmonisation WG
Dr Kay Weng Choy, Chair of Clinical Decision Support WG
Dr Lim Say Min, Chair of Monoclonal Gammopathy WG
Dr Tony Badrick, Chair of Patient-based Real-Time Quality Control WG
Dr Thyrsa Darmadi, Chair of Newborn Screening WG

1. Reference Intervals WG

The Harmonization of Reference Intervals WG has examined and compared indirect methods for the derivation of reference intervals and biological variation values using simulation. The results of these studies have resulted in three publications. Two other review publications on the use of bone markers in the Asia Pacific region and functional reference intervals have also been published under the WG. The WG is looking to launch a APRILS (Asia Pacific Reference Intervals Study) to derive indirect reference intervals within the region. There is active effort to secure fundings external to APFCB to recruit a statistician to assist in the analysis of the laboratory data.

Publications:

- Comparison of two (data mining) indirect approaches for between-subject biological variation determination. Tan RZ, et al; APFCB Harmonization of Reference Intervals Working Group. Clin Biochem 2022 Apr 27:S0009-9120(22)00118-7. doi: 10.1016/j.clinbiochem.2022.04.015. Online ahead of print.
- Comparison of 8 methods for univariate statistical exclusion of pathological subpopulations for indirect reference intervals and biological variation studies. Tan RZ, et al; APFCB Harmonization of Reference Intervals Working Group. Clin Biochem 2022;103:16-24.

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- c. Comparison of four indirect (data mining) approaches to derive within-subject biological variation. Tan RZ, et al; APFCB Harmonization of Reference Intervals Working Group. Clin Chem Lab Med 2022;60(4):636-44.
 - d. The Use of Bone-Turnover Markers in Asia-Pacific Populations. Vasikaran S et al; APFCB Harmonization of Reference Interval Working Group. Ann Lab Med. 2024 Mar 1;44(2):126-134.
 - e. Functional Reference Limits: Describing Physiological Relationships and Determination of Physiological Limits for Enhanced Interpretation of Laboratory Results. Chuah TY, et al; APFCB Harmonization of Reference Intervals Working Group. Ann Lab Med. 2023 Sep 1;43(5):408-417.

2. Mass Spectrometry Harmonisation WG

An international survey conducted previously by the WG found variation in laboratory practice in 17OHP measurement by mass spectrometry. A subsequent study examined the impact of internal standards choices on 17OHP measurement. A 2022 multicenter (Hong Kong and Australia) study examined the prevalence of isobar in clinical samples submitted for 17OHP measurement. In 2023, an international collaboration between RCPAQAP, AACB and SKML was undertaken to examine the impact of isobar on 17OHP measurement by circulating isobar-enriched proficiency testing materials to participating laboratories in Europe and Asia Pacific regions. The results of the proficiency challenge were published as a manuscript.

Publications:

- a. Endogenous isobaric interference on serum 17 hydroxyprogesterone by liquid chromatography-tandem mass spectrometry methods. Lo CWS, et al. Clin Chem Lab Med. 2022 Dec 2;61(3):e64-e66.
- b. Ensuring quality in 17OHP mass spectrometry measurement: an international study assessing isomeric steroid interference. Ho CS, Hoad K, Cooke BR, Andersen T, Graham P, van den Berg SAA, Hartmann MF, Lo CWS, Loh TP, de Rijke YB, van Zelst BD, Wudy SA, Zakaria R, Greaves RF. Clin Chem Lab Med. 2023 Dec 11.

3. Clinical Decision Support WG

This newly set up working group has focused its initial activity on first performing a systematic literature review on clinical decision support as applied in laboratory medicine, and the results have been selected for a symposium session at the IFCC Dubai Meeting in May 2024. A manuscript is being prepared. The WG chair also organised a Clinical Chemistry Q&A with international experts on this topic (in print). Finally, the APFCB WG has collaborated with the RCPA Informatics Advisory Committee on producing a high-level position statement to be published in 2024.

4. Monoclonal Gammopathy WG

This is a newly set up WG. The WG intends to produce an 'electronic' external quality assurance program for qualitatively interpreting monoclonal gammopathy-related testing. Additionally, the WG has undertaken two systematic literature reviews on monoclonal gammopathy testing and free light chain reference intervals, respectively. Unfortunately, the WG chair has stepped down for personal and professional reasons, and a replacement chair is being identified.

Publication:

- a. A review of clinical guidelines, laboratory recommendations and external quality assurance programs for monoclonal gammopathy testing. Lim SM, et al. Crit Rev Clin Lab Sci. 2023 Sep 30:1-20.



5. Patient-based Real-Time Quality Control WG

This is a newly set up WG. The WG has hosted an APFCB webinar on patient-based real-time quality control practices in an Ask The Expert format. It was well attended by approximately 100 attendees using an online facility. The WG has completed a narrative review on next-generation PBRTQC practices and is preparing another opinion piece on advanced PBRTQC algorithms.

6. Newborn Screening WG

This WG was newly formed and transferred over from the Laboratory Management Committee for a better fit for its objectives. As part of the WG objective to increase the adoption of newborn screening in the region, Dr TP Loh engaged a mass spec vendor to craft a 'special APFCB' package that would lower the capital cost of adopting newborn screening technology. This proposal did not secure firm support from the vendor when writing this report. Alternate vendors/mechanisms will be explored to advance this objective.

EDUCATION COMMITTEE (C-E)

Committee Chair : Dr Wei Cui

Members : Dr Nada Syazana Zulkifli (Malaysia)
Dr Mithu Bannerjee (India)
Dr Aamir Ijaz (Pakistan)
Mr Pearline Teo (BD Company)
Mr Sum Li (Greiner Bio-One Company)

The mission of C-E is to provide APFCB members and the healthcare community with educational activities relevant to the region in the field of Clinical Chemistry and Laboratory Medicine. It will be concerned with developing an educational network within member Associations/Societies of the Federation to share educational materials and resources and coordinate the activities of the national educational representatives of the member Associations/Societies.

1. APFCB Presence in the Region

To raise the profile of APFCB in China, Dr. Tony Badrick was invited to attend the Annual Conference of the Chinese Society of Laboratory Medicine and delivered a speech on March 31 in Changsha, China.

2. The APFCB Young Scientist Award Competition

As a scientific organisation committed to promoting various scientific and educational programs for clinical biochemists in Asia-Pacific, APFCB keeps up efforts to foster young scientists' scientific potential. In April, the APFCB Education Committee organised a Young Scientists Award Competition, which could provide financial support for young scientists to attend IFCC-EFLM WorldLab/EuroMedLab in Rome, Italy, from May 21-25, 2023.

Ten winners were selected after a thorough assessment of applicants' abstracts accepted by the congress. They were invited to the Congress and IFCC Young Scientists FORUM in Rome. Eight of them finally attended the congress. They are Rina Kawaguchi (Japan), Siska Darmayanti (Indonesia), Taru Goyal (India), Monica Irungbam (India), Rina Triana (Indonesia), Chandra Agung Purnama (Indonesia), Juliyatin Putri Utami (Indonesia), Aktaruddin Arief Santoso (Indonesia).

For all the winners, the meeting was impressive and fruitful. Most importantly, this experience is critically helpful for their scientific and career success in the future.



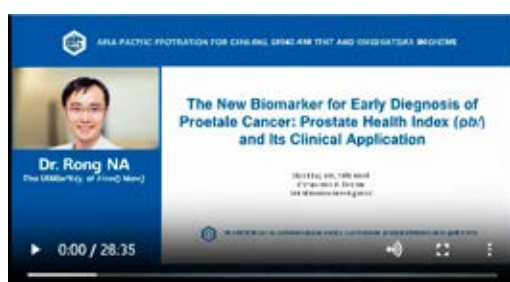
Winners' Group Photo at IFCC-EFLM WorldLab/EuroMedLab

3. APFCB-AACB Travelling Scholarship

AACB 60th Annual Scientific Conference was held on 17-19 October in Brisbane, Australia. APFCB offered two scholarships for qualified candidates to attend this meeting. After an assessment based on the quality of all the participants' abstracts, Dr. Susruta Sen from India and Dr. Mihika Fernando from Sri Lanka were awarded scholarships to attend the AACB Conference.

4. APFCB Online Education Program

As a part of C-E annual plan, we started an education column on the APFCB website, which is composed of a series of videos of lectures and webinars. As a first step, we collected two videos from an HK professor, Dr Rony Na, and another from a Chinese professor, Prof Wei Guo. These two videos have already been posted on the APFCB website and can be visited. We will collect more videos and webinars to strengthen the educational capability of this column.



Lecture Video by Dr. Rong NA

5. APFCB - Becton Dickinson Flow Cytometry Workshop

On November 28, in collaboration with the Beijing Society of Laboratory Medicine and BD company, the APFCB Education Committee organized a workshop: 2023 Summit of the Standardization of Clinical Flow Cytometry. Prof Wei Cui from Cancer Hospital, Chinese Academy of Medical Sciences, on behalf of the APFCB Education Committee, delivered a welcome speech and a lecture on the Standardization of Peripheral Blood Lymphocyte Subsets Detection by Flow Cytometry. Prof Sa Wang from MD Anderson Cancer Center, University of Texas, delivered a lecture titled Development of a 12-color Flow Cytometry Assay for the Detection of Minimal Residual/measurable Disease (MRD) of Acute Myeloid Leukemia (AML).

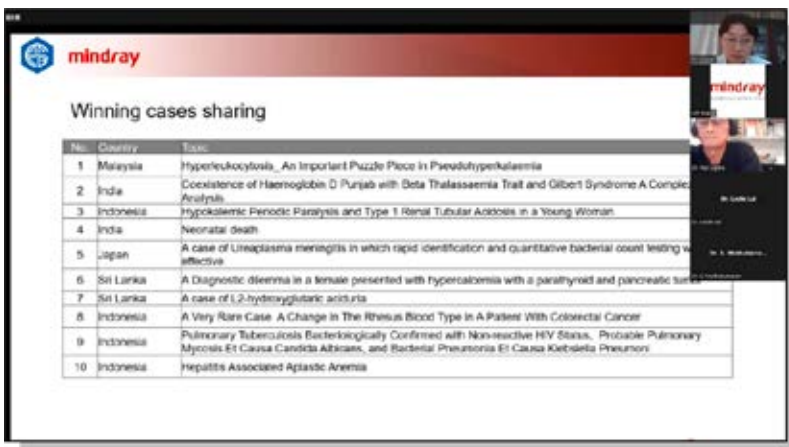
Prof Jianhua Pan from KingMed Independent Clinical Laboratory and Dr. Darci Gorgone Chavez from BD company also introduced the standardisation and QC of clinical flow cytometry. Because of the increasingly wide application of clinical flow cytometry, standardisation and quality control of flow cytometry are getting more attention. More than 200 customers attended this meeting. This is the first workshop organised by the APFCB education committee, which significantly improved the reputation of APFCB in Grand China.

6. APFCB Laboratory Medicine Case Contest

On December 15, the APFCB Laboratory Medicine Case Contest was successfully concluded. This activity was launched on August 28. A total of 68 case reports were received during the first round. Among them, 50 cases were selected based on the quality of abstracts. Finally, 47 qualified video presentations were enrolled in the second round. After assessment of the Topic & content, Scientific & practicability, Originality & correctness, 10 winners participated in the finals on December 15. The final contest is an online presentation and discussion. Six distinguished professors were invited to be the judges. They are Dr. Tony Badrick, Dr. Leslie Lai, Dr. Sian Hwa Tjan, Dr. Helen Martin, and Dr. Goce Dimeski. According to the scores of each participant by every judge, 2 first prizes, 3 second prizes, and 5 third prizes were selected.



APFCB Laboratory Medicine Case Contest Poster



Screenshot of APFCB Laboratory Medicine Case Contest Finals



APFCB- COMMUNICATION AND PUBLICATION COMMITTEE

Committee Chair: Dr Pradeep Kumar Dabla

The APFCB Committee of Communication and Publications (C-CP) is responsible for developing, overseeing, reviewing, and addressing system-wide policies and issues about the organisation's website and online operations.

The committee is also responsible for the online publication of APFCB news and collaborates with the member associations and corporate members to promote participation and broader dissemination of relevant online activities, educational material and resources for the laboratory medicine personnel. Through this mode, C-CP directly supports novel ideas and encourages and promotes member associations to develop policies and strategies that assist with broad goals for patient care. The new Chair of the Communications and Publications Committee for the term 2023-2025 was appointed in March 2023 by APFCB-EB (Executive Board).

Members of the APFCB C-CP for this term are as:

- Dr. Pradeep Kumar Dabla (Chair)
- Dr. Deepak Parchwani (Web Editor)
- Dr. Ryunosuke Ohkawa
- Dr. Mingma Lhamu Sherpa
- Dr. Alireza Lotfi Kian
- Dr Tze Wei Poh (Corporate - Beckman Coulter) (member till Dec2023)

Following their appointment, through the APFCB e-newsletter, social media, and official website, the new C-CP team has strengthened the organisation's online presence.

Over the previous year, the C-CP maintained active communication and used electronic methods to promote the APFCB's operations to its member societies in the Asia Pacific area and nations under the IFCC umbrella.

In summary, the following heads outline the committee's operation in the preceding year:

1. APFCB Website - Maintenance & Management:

The C-CP oversees the creation, upkeep, and administration of the APFCB website. Following the present committee's takeover, a new and dynamic APFCB website is operational. The most recent details about webinars, online courses, and virtual conferences hosted by the APFCB, its member societies, and international professional bodies are regularly updated on the federation's website. Scientific publications, guidelines, and webinars (live & recorded) on various interesting topics are also made available.

A substantial transformation was made from the prior version. Principal ones include improved webinar exposure with ongoing updates; creating a quick link tab emphasising the APFCB Auspices on the home page, social media and news; upgrading the announcement section, social media, visitors' stats and designated space for corporate partners.

APFCB auspices calendar organised:

APFCB is committed to maintaining and promoting an exchange of information in the field of patient care by creating communication links between the involved parties. "Auspices" symbolises the recognition of a professional conference activity of high scientific and/or educational level. It has been methodically set up and organised since the federation views it as a crucial area for its outreach.



2. Stewardship of APFCB Social Media Platform

Social media has become an indispensable part of our lives; it is a great online teaching-learning and publicising platform for the federation. Everyone has at least one account on any one of the social media sites. This allows them to meet the target population where they are by connecting on channels they use every day, i.e. it creates an opportunity for our federation to be even more user-centric to spread information across the world.

The current C-CP set up newer social media profiles and revived the passive handles for the APFCB to effectively communicate and distribute news, publications, nominations, awards, congress and updates on the federation's activities with national societies and clinical laboratory experts.

After assuming the role by the current C-CP, the APFCB is not only officially available but is actively disseminating the relevant information under the purview of APFCB on Facebook, Twitter, LinkedIn, Instagram and YouTube.

Links to the APFCB social media pages are as follows – <https://www.apfcb.org/networking>

Facebook Page: <https://www.facebook.com/APFCB/>

Twitter: https://twitter.com/APFCB_LM

Instagram: https://www.instagram.com/apfcb_lm/

LinkedIn <https://www.linkedin.com/company/apfcb/>

YouTube: <https://www.youtube.com/channel/UCoiicTsnVX-COjkgZHQ54Q>



3. Publication of online activities, educational material and resources

In the era of digital connectivity, the publication of online activities, educational materials, and resources plays a pivotal role in fostering accessible learning environments. Educators can share engaging content, interactive exercises, and valuable resources through diverse platforms, transcending geographical boundaries. This dissemination facilitates the democratisation of education, empowering learners globally.

Amidst the ongoing surge in digital connectivity demand, the publication of online activities, educational materials, and resources is significantly enhanced through C-CP continuous efforts. We provided diverse platforms to share dynamic content, interactive exercises, and valuable resources, creating a vibrant and accessible learning ecosystem.

(visit: https://www.apfcb.org/continuing_education).

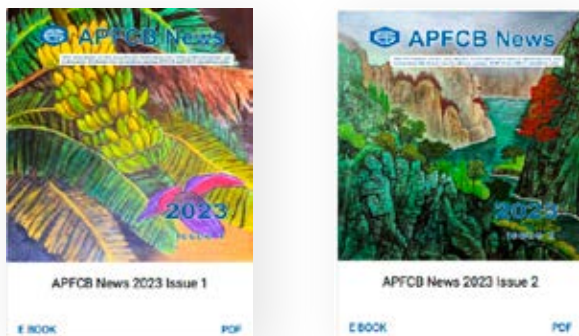
4. Practices to Promote the Education and/or relevant activities of the federation

The homepage of the APFCB website and social media platforms are used to publicise all forthcoming events. The C-CP also notifies members of impending events and extends blast email invitations to them. The C-CP is relentlessly working to meticulously update and expand the list of members in its database.

5. Publication of APFCB News

The C-CP takes charge of the online publication of APFCB News (<https://www.apfcb.org/#newsletter>). The chair of the C-CP, who was just elected, has been responsible for being the APFCB News's Chief Editor.

The newsletter is published twice yearly and can be found on the APFCB website as an e-book. It can also be accessed as a PDF version. As per the convention of the newsletter's biannual publication schedule, two editions were released in the year 2023:



In keeping with convention, **paintings of Dr. Tan It Koon**, the organisation's founder and former president, were kept as the front cover of the newsletter of both issues (**Issue 1: A Bunch of Ripening Bananas with Flower Bud Still Attached** and **Issue 2: A Beautiful View of the Three Gorges in China**).

The published APFCB News (Volume 1 and 2) includes myriads of information, ranging from delineating annual reports from the members societies showcasing their efforts in adding scientific knowledge to laboratory medicine, expert opinion in laboratory quality management & artificial intelligence, special reports from IFCC Global Medical Lab Week celebrations 2023 & sustainable green labs.

A feature piece on Tony Badrick (APFCB President) authored by Dr Pradeep Kumar Dabla (Chief editor; eNews APFCB) was published in APFCB News 2023 Issue 2 in recognition of his honour of “Member of the Order of Australia” for his services and immense contribution towards the community and science.

Industry partners have shown great enthusiasm while sharing reports for industry voice, whether triage or non-invasive prenatal testing (NIPT). Their active engagement underscores a commitment to advancing cutting-edge technologies and practices, fostering innovation, and collectively shaping the future landscape of diagnostic and prenatal healthcare.

An additional fascinating feature included in APFCB News 2023 is visibility to young scientists, and it is always thrilling to see young scientists share their efforts. The full report on the 2nd IFCC Young Scientists’ Forum, organised in conjunction with IFCC World Lab Euro-Med Lab 2023 and Rome, was made available in the second issue.

To standardise article submissions to the APFCB news, the C-CP team drew up a Guideline for submitting reports, articles, and corporate advertisements. These guidelines are accessible on the APFCB website homepage via this link:

<https://www.apfcb.org/Submission%20Guidelines%20APFCB%20News%20050721.pdf>.

A key new feature added to APFCB news is the clinical case discussion due to its inevitable importance in clinical medicine and practice as an instructive example to people who might encounter similar problems.



The APFCB News features a compelling quiz and expert papers, offering a rich source of knowledge in clinical chemistry and laboratory medicine. The quiz tests readers' understanding of crucial topics, while expert papers delve into the latest advancements and insights. This combination ensures a comprehensive learning experience, keeping professionals abreast of developments in laboratory medicine and promoting continuous education within the APFCB community. It serves as a valuable platform for sharing expertise and fostering collaborative growth.

Recommendations for the upcoming year:

The committee will further explore under the following heads in AY 2023-2024 to expand the APFCB network:

APFCB Webinar platform:

Marshall McLuhan, in 1964, quoted that the digital communication world is becoming a global village. This concept says that communication has become instantaneous due to technological evolution. The same notion has now come into existence as learning/re-learning and shifted to the digital arena. With this concept and considering the raised activities/requirements and best marketing techniques, we propose to organise a series of webinars to reach our target audience.

A webinar permits many virtual functionalities in that a fully managed webinar platform provides the organisers with numerous interactive features that make learning and networking possible. Another characteristic that makes webinars an exceptional choice is that they can reach a wider audience without limitations. Some of the most eminent advantages of Webinars include, Simpler Way to Gather Wider Audience, Easy Availability of High-Profile Guests, Cost-Effective Learning Method, Encourages Interaction, Great Flexibility & Convenience for All, Excellent Way to Grow Networks, and Branding & Customization.

Social media expansion

Connecting on social media handles that the target population uses on a daily/regular basis enables us to meet them where they are and gives our federation the chance to disseminate the information worldwide. Major benefits of social media for our system include but are not limited to, as a communication channel for Networking, creative demonstration, connecting with experts, marketing tools, access to information, and publishing news and updates. Because of this, it is necessary to use these social media channels aggressively for outreach.

e-Mail Marketing

E-mail marketing is a type of direct digital marketing method that uses emails to engage with a target audience. It involves sending promotional or informational content. APFCB can use e-mail marketing typically to create brand awareness and generate leads and presence at an international forum by being cost effective.

To utilise the platform of APFCB News for APFCB activities:

In the forthcoming issues of APFCB News 2024, C-CP proposes to publish the APFCB Clinical Cases in batches of 2 to 4, considering that case studies are one of the cornerstones of medical progress and may provide novel ideas in the field.

Corporate Representatives Report:

Dr Douglas W Chung MPH (Infectious Diseases) FRSPH
Corporate Representative

1. Corporate Members

1.1. Active corporate members

There are 16 active Corporate Members listed at the start of this Report.

1.2. Delisted corporate members

No corporate members were delisted in the period Jan – Dec 2023.

1.3. New corporate members

Two new corporate members, Shenzhen Mindray Bio-Medical Electronics Co, Ltd. and Greiner Bio-One Singapore Pte Ltd. were added in Jan – Dec 2023.

2. Corporate Member Webinars & Events

In 2023, the following Corporate Members conducted events under APFCB auspices:

- Abbott Laboratories (Singapore) Pte Ltd. supported an IACC-APFCB virtual event on Green Laboratory
- Becton Dickinson supported the APFCB-BD Flow Cytometry Workshop
- Roche Diagnostics Asia Pacific – meetings in Seoul (South Korea) and Yokohama (Japan)
- Shenzhen Mindray Bio-Medical Electronics Co, Ltd supported the APFCB Laboratory Medicine Case Contest
- Snibe Co., Ltd. – various conferences and symposia held in Sri Lanka, Nepal, India, Hong Kong, Shenzhen, Dubai

3. Publications and Communications

The APFCB newsletter (2 issues per year) has a dedicated “Industry Voice” section that provides a platform for Corporate Members to contribute articles of educational or scientific relevance. Corporate Members can also place paid advertisements in the newsletter. We encourage Corporate Members to use this platform to reach a wide audience of laboratory professionals across the region.

4. Other administrative updates

The Corporate Representative also assists the Executive Board in various administrative matters concerning the Registry of Societies (ROS) under the Singapore Ministry of Home Affairs. The ROS record has now been updated to reflect the current officers of the APFCB Executive Board.

Tony Badrick, President APFCB


REPORTE DE ACTIVIDADES “CONFEDERACION LATINOAMERICANA DE BIOQUIMICA CLINICA” GESTION 2023

N°	DESCRIPCION DE ACTIVIDADES	INVOLUCRADOS EN SU DESARROLLO: CE COLABIOCLI, ORGANISMOS INTERNACIONALES, GRUPOS DE TRABAJO, PROFESIONALES INVITADOS	FECHA
1.-	ACTIVIDADES ESTRUCTURACION NUEVA GESTION		
1.1.-	Reunión Elaboración Cronograma de Actividades Gestión 2023	En reunión del CE COLABIOCLI	26 de enero
2.-	ACTIVIDADES DE FORMACION CONTINUA		
2.1.-	CURSOS MODULARES		
2.1.1.-	Planificación estratégica en los laboratorios y liderazgo de los jóvenes profesionales	CE COLABIOCLI, IFCC COMO AUSPICIADOR.	16-03 al 27-04
2.1.2.-	Evaluación de la calidad analítica en el laboratorio clínico. Una visión actualizada	CE COLABIOCLI. DOCENTE DR. GABRIEL MIGLIARINO	13, 20 Y 27 de abril
2.1.3.-	El valor de la fase pre analítica en el laboratorio	CE COLABIOCLI, Grupo de Preanalítica. COORDINADOR: Dr. Eduardo Aranda	02-05 al 02-06
2.1.4.-	Producción de nuevas tecnologías en banco de sangre	CE COLABIOCLI, Grupo de trabajo de Banco de sangre COORDINADOR: Dra. María Jezabel Vite	01-07 al 31-07
2.1.5.-	Requisitos de la nueva versión ISO 15189	CE COLABIOCLI, Grupo de Trabajo de Acreditación Coordinadora: Dra. Rosa Sierra Amor	01-09 al 30-09
2.1.6.-	Biología Molecular Aplicado al Diagnóstico Laboratorial	CE COLABIOCLI, SOCIEDAD BRASILEIRA DE ANALISIS CLINICO, llevado a cabo en portugués	01-10 al 30-11
2.1.7.-	Bioética en la actividad asistencial y en la investigación	CE COLABIOCLI, Grupo de Trabajo de Bioética. COORDINADOR. Dra. Nilda Fink	18-09 al 04-12
2.1.8.-	Curso de Resistencia a antimicrobianos	CE COLABIOCLI – OPS. COORDINADOR Dr. Juan Pablo Gramático	14-09 al 31-10



N°	DESCRIPCION DE ACTIVIDADES	INVOLUCRADOS EN SU DESARROLLO: CE COLABIOCLI, ORGANISMOS INTERNACIONALES, GRUPOS DE TRABAJO, PROFESIONALES INVITADOS	FECHA
2.1.9.-	Simposio internacional de micología médica y clínica	CE COLABIOCLI- SBAC. COORDINADOR. Dr. Paulo Murillo	19, 20 y 21 de octubre
2.2.-	SEMANAS DE CONCIENTIZACION		
2.2.1.-	Semana de la Calidad	CE COLABIOCLI	3 al 7 de abril
2.2.2.-	Semana del donante voluntario y altruista	CE COLABIOCLI- Grupo de trabajo de Banco de sangre	11 al 14 de septiembre
2.2.3.-	Semana de revalorización del profesional en laboratorio clínico	CE COLABIOCLI	2 al 7 de octubre
2.3.-	WEBINARIOS CE COLABIOCLI Y PAISES MIEMBROS		
2.3.1.-	Salud cognitiva y enfermedades del cerebro	CE COLABIOCLI y PANAMÁ	28 de marzo
2.3.2.-	Implicancia de microbiota humana en la salud y enfermedad	CE COLABIOCLI y Paraguay	25 de abril
2.3.3.-	La humanización en salud: "por una cultura de humanización en los servicios de salud"	CE COLABIOCLI y República Dominicana	30 de mayo
2.3.4.-	Inteligencia artificial aplicada al laboratorio clínico	CE COLABIOCLI - IFCC	5 al 9 de junio
2.3.5.-	Plasma rico en plaquetas y fibrina rica en plaquetas: presentaciones y usos desde la bioquímica regenerativa	CE COLABIOCLI y Argentina	25 de junio
2.3.6.-	El laboratorio clínico como apoyo en los trasplantes de órganos sólidos y células hematopoyéticas	CE COLABIOCLI y México	4 de julio
2.3.7.-	Miniaturización de plataforma: aplicación en biología molecular	CE COLABIOCLI y Brasil	29 de agosto
2.3.8.-	El laboratorio y su impacto en el medio ambiente	CE COLABIOCLI - IFCC	25 al 29 de septiembre
2.3.9.-	The community cohort: estudio de cohorte prospectivo sobre la respuesta inmune humoral de adultos con riesgo cardiovascular expuesto a antígenos de SARS COV-2	CE COLABIOCLI y Chile	26 de septiembre



N°	DESCRIPCION DE ACTIVIDADES	INVOLUCRADOS EN SU DESARROLLO: CE COLABIOCLI, ORGANISMOS INTERNACIONALES, GRUPOS DE TRABAJO, PROFESIONALES INVITADOS	FECHA
2.3.10.-	Por confirmar	CE COLABIOCLI y Colombia	31 de octubre
2.3.11.-	Microbiota y envejecimiento saludable: el caso de la península de Nicoya en costa rica	CE COLABIOCLI y Costa Rica	28 de noviembre
2.3.12.-	Por confirmar	CE COLABIOCLI y Ecuador	8 de diciembre
2.4.-	WEBINARIOS DE GRUPOS DE TRABAJO DE COLABIOCLI		
2.4.1.-	Redefinición del perfil profesional bioquímico o equivalente para el manejo de las ciencias del laboratorio.	CE COLABIOCLI y Grupo Comisión Académica, Gremial y de Gestión	27 de junio
2.4.2.-	Indicadores de calidad: Qué son y Cómo implementarlos en el Laboratorio Clínico	CE COLABIOCLI, Grupo de Trabajo Gestión de Acreditación	18 de julio
2.4.3.-	Los Jóvenes profesionales en el campo laboral y los retos ante el Salario Emocional	CE COLABIOCLI, Grupo de Jóvenes Profesionales	22 de agosto
2.4.4.-	El donador de Sangre Seguro y empoderado	CE COLABIOCLI, Grupo Banco de sangre	19 de septiembre
2.4.5.-	Remanentes de muestras clínicas en el laboratorio de diagnóstico: dilemas éticos sobre su uso para investigación y desarrollo	CE COLABIOCLI, Grupo de Bioética	24 de octubre
2.4.6.-	Calidad en la etapa preanalítica: el dilema del ayuno	CE COLABIOCLI, Grupo de Preanalítica	21 de noviembre
2.4.7.-	Nuevos paradigmas y transdisciplinas en el laboratorio clínico	CE COLABIOCLI Grupo de nuevos paradigmas y transdisciplinas en los profesionales del laboratorio	20 de diciembre
2.5.-	CONVERSATORIOS		
2.5.1.-	Nuevos paradigmas y transdisciplinas en el laboratorio clínico	Participación de expertos de los países de COLABIOCLI	14 de marzo
2.5.2.-	Red latinoamericana de entidades formadoras de profesionales bioquímicos y títulos equivalentes en América latina y el caribe	Participación de expertos de los países de COLABIOCLI	11 de abril
2.5.3.-	Los jóvenes profesionales del laboratorio clínico - los desafíos dentro de COLABIOCLI	Participación de expertos de los países de COLABIOCLI	9 de mayo



N°	DESCRIPCION DE ACTIVIDADES	INVOLUCRADOS EN SU DESARROLLO: CE COLABIOCLI, ORGANISMOS INTERNACIONALES, GRUPOS DE TRABAJO, PROFESIONALES INVITADOS	FECHA
2.5.4.-	Pruebas al lado del paciente -POCT son una alternativa - el autotest	Participación de expertos de los países de COLABIOCLI	13 de junio
2.5.5.-	Rol del profesional del laboratorio	Participación de expertos de los países de COLABIOCLI	11 de julio
2.5.6.-	Acreditación de laboratorios, necesidad u obligatoriedad, 151189 o norma alternativa, que avanzamos en Latinoamérica	Participación de expertos de los países de COLABIOCLI	8 de agosto
2.5.7.-	Actualización en COVID 19	Participación de expertos de los países de COLABIOCLI	12 de septiembre
2.5.8.-	El pre y post análisis en el laboratorio clínico - transformar resultados en informes	Participación de expertos de los países de COLABIOCLI	10 de octubre
2.5.9.-	Confidencialidad de los datos en las diversas patologías de denuncia obligatoria: dos miradas de un mismo desafío	Participación de expertos de los países de COLABIOCLI	14 de noviembre
2.5.10.-	Liderazgo y planificación estratégica del laboratorio clínico	Participación de expertos de los países de COLABIOCLI	12 de diciembre
2.6.-	CONVOCATORIAS A CONCURSOS		
2.6.1.-	Convocatoria a concurso de pintura fotografía "rol del profesional del laboratorio clínico"	CE COLABIOCLI	30 de julio
2.6.2.-	Concurso de videos COLABIOCLI: tema. Los exámenes de laboratorio, el valor de ellos en la toma de decisiones médicas	CE COLABIOCLI	30 de julio
3.-	ACTIVIDADES ADMINISTRATIVAS		
3.1.-	Reuniones de Comité Ejecutivo COLABIOCLI. Los primeros martes de cada mes	Miembros CE COLABIOCLI	mensual
3.2.-	Reuniones de Presidentes de Entidades Nacionales. Dos reuniones programadas para la gestión	Presidentes de las Filiales de COLABIOCLI	26 de enero 3 de mayo 14 de septiembre
3.3.-	Reuniones con los responsables de Grupo de Trabajo	Responsables de los 7 Grupos de Trabajo	14 de febrero 11 de agosto



N°	DESCRIPCION DE ACTIVIDADES	INVOLUCRADOS EN SU DESARROLLO: CE COLABIOCLI, ORGANISMOS INTERNACIONALES, GRUPOS DE TRABAJO, PROFESIONALES INVITADOS	FECHA
3.4.-	Reuniones Comité Organizador Congreso Latinoamericano de Bioquímica Clínica – Colombia “Cartagena de Indias 2024”. Dos reuniones programadas	Colegio Nacional de Bioquímica CNB Colombia, Presidente COLABIOCLI	24 de febrero 13 de junio 15 de septiembre 30 de noviembre
3.5.-	Reuniones Comité Organizador Conferencia Regional COLABIOCLI Guatemala	COLABIOCLI- Asociación de Químicos Biólogos de Guatemala	31 de marzo 28 de abril 20 de julio 9 de agosto 13 de septiembre
3.5.-	Participación Conferencia General de la IFCC.	Presidente CE COLABIOCLI	
3.6.-	Aprobación de Reglamento de Grupos de Trabajo	CE COLABIOCLI y representantes de países miembro	18 y 19 de junio
3.7.-	Aprobación de Reglamento de avales y auspicios COLABIOCLI	CE COLABIOCLI y representantes de países miembro	18 y 19 de junio
3.8.-	Aprobación de Reglamento para acceder al PEEC-PNCQ	CE COLABIOCLI y representantes de países miembro	18 y 19 de junio
3.9.-	Encuesta de actividades y procesos de la fase preanalítica	Grupo de Trabajo Preanalítica	septiembre
3.10.-	Encuesta sobre Acreditación de Laboratorios en los países de la Región.	Grupo de Trabajo de Gestión de Acreditación.	para culminar 2023
3.11.-	Encuesta para el relevamiento de sistemas de certificación y recertificación profesional.	Actividad en curso	para culminar 01 de 10
4.-	ACTIVIDADES DE SOPORTE A LA FORMACION ACADEMICA		
4.1.-	Creación del grupo de trabajo "Nuevos Paradigmas y Trans Disciplinas en el Laboratorio Clínico"	CE COLABIOCLI	01 de febrero
4.2.-	Creación del Comité Científico COLABIOCLI	CE COLABIOCLI	08 de febrero



N°	DESCRIPCION DE ACTIVIDADES	INVOLUCRADOS EN SU DESARROLLO: CE COLABIOCLI, ORGANISMOS INTERNACIONALES, GRUPOS DE TRABAJO, PROFESIONALES INVITADOS	FECHA
4.3.-	Lanzamiento de boletín COLABIOCLI "novedades COLABIOCLI"	CE COLABIOCLI	01 de marzo
4.4.-	Fortalecimiento de la base de datos de del programa latinoamericano de capacitación	CE COLABIOCLI	01 de febrero 01 de agost
4.5.-	Participación del Presidente de COLABIOCLI, Dr. Álvaro Justiniano Grosz en representación de la entidad en diferentes Congresos	Participación del Presidente de COLABIOCLI	Fecha
5.-	ACTIVIDADES DE SOPORTE A LA CALIDAD		
5.1.-	Convocatoria a la participación PEEC gratuito del PNCQ 2023	CE COLABIOCLI	01 de febrero
5.2.-	Implementación de los proyectos piloto sobre planificación estratégica en los países miembros de COLABICLI que voluntariamente quieran desarrollar	CE COLABIOCLI	Mayo de 2023
6.-	EVENTOS INTERNACIONALES ORGANIZADOS POR COLABIOCLI		
6.1.	2° Conferencia Latinoamericana de Jóvenes profesionales del laboratorio Clínico Florianópolis - Brasil	CE COLABIOCLI, SBAC	18 de junio
6.2	Asamblea extraordinaria de la COLABIOCLI Florianópolis - Brasil	CE COLABIOCLI, SBAC	19 y 20 de junio
6.3	1° Conferencia Regional COLABICLI ciudad Guatemala	CE COLABIOCLI, Asociación de Bioquímicos de Guatemala	21 y 22 de noviembre

Álvaro Justiniano Grosz, President




In 2023, the EFLM General Meeting was held on occasion of the Worldlab-EuroMedLab 2023 in Rome, on May 21. The NSs representatives had the opportunity to hear reports from the EFLM President and Treasurer, as well as the Committee Chairs, about the activities in the previous period. During the meeting, two applications for affiliate membership were approved, submitted by the ACCLC (Catalan Association of Clinical Laboratory Sciences) and SANAC (Andalusian Society for Clinical Analysis and Laboratory Medicine), both from Spain. Also, the GM elected the new EB for 2024-25. The new composition of the EB is: Mario Plebani – President, Tomas Zima – President Elect, Tomris Ozben – Past President, Snežana Jovičić – Secretary, Klaus Kohse – Treasurer, Pilar Fernandez-Calle and Dalius Vitkus – members-at-large.

In 2023, the EFLM EB proposed to establish corporate membership status to improve the communication and collaboration between IVD industry and laboratory professionals, which would be beneficial for laboratory professionals as well. The benefits for Corporate Members include the possibility to become corresponding member in the suitable functional units (Executive Board excluded) and access to important documents and information of their interest. Corporate Members may also keep supporting EFLM research and educational activities, they could use EFLM logo to identify their EFLM membership. The EFLM General Meeting unanimously approved the new membership status for corporate members and the consequent changes at the EFLM bylaws on the extraordinary online meeting held on September 7.

The CPECS® - Continuing Professional Education Credit System, established by the WG on Laboratory Medicine Credit Points, was applied for the first time on EuroMedLab/WorldLab Rome 2023. The interested educational events providers may apply online, through the CPECS® application software (<https://cpecs.eflm.eu/>). The detailed description of the process to become an accredited CPECS® Provider can be found in the CPECS® Manual, also available through the same platform (<https://cpecs.eflm.eu/documents/EFLM-CPECS-Official-Manual-v1-2023.pdf>). In order to ensure efficiency in the recognition and implementation of CPECS®, the TF CPECS®, working directly under the EB, was established. The TF CPECS® will strictly be working with EFLM and IFCC National Societies and their National Accreditation Authorities, as well as other International crediting bodies, in order to sign agreements for the mutual recognition of the CPECS® locally. In those countries where a national crediting system is not in place, the CPECS® system can directly represent the system adopted at national level for the certification of the educational events and may recognize CPECS® credits on a voluntary basis.

In June 2023, EFLM launched the call for laboratories to apply for „Green and Sustainable Labs“ certification. In July Chair of the TF „Green and Sustainable Laboratories“, Tomris Ozben, held several online meetings with the Presidents, Representatives, Experts of the EFLM NSs to update them with the progresses and to promote the program. The whole application process and the guidelines available in seven languages (English, French, German, Italian, Spanish, Turkish, and Romanian) is available online, through the „Green Labs“ platform (<https://greenlabs.eflm.eu/>). By the end of the year 5 laboratories were certified by EFLM as “Green & Sustainable Laboratory”. Also, the European Commission European Green Deal and DG SANTE Cabinets were updated about the latest progresses of the TF GSL.

After reviewing comments and suggestions received from Functional unit’s chairs, Presidents and National Representatives of EFLM National Society Members, EFLM EB finalized the EFLM Strategic Plan 2022–2023. The actions regarded establishment of new functional units to effectively deal with strategic points: WG Ethics (under the Committee – Profession), and the



two TFs under the EB: TF – Preparation of Labs for Emergencies, and TF Direct-to-Consumer Testing. Besides the core members invited by TFs' Chairs, these functional units consist also of national societies' representatives that expressed interest in terms of reference and in work of the particular TF. The TF Integrated Diagnostics: A New Interdisciplinary Frontier was established under the Committee – Science. The EB also approved the establishment of three new functional units under the Committee – Science, after the initiative and project proposal of their Chairs: WG Biomarkers of mild Traumatic Brain Injury (mTBI), TG Practical Guide to Implement Measurement Uncertainty, and TFG Biomarkers of Nitrous Oxide Abuse.

Also in 2023, 11 National societies applied for the program “Invite an Executive Board Member at Your National Society Congress”. The applications of five NSs which had received minimum support in the previous 10 years were accepted. The EFLM EB members attended NSs meetings in Georgia, Hungary, Portugal, Montenegro, and Ireland.

In 2023, EFLM continued active collaboration with MedTech Europe and BioMed Alliance. The MoU were renewed with European Radiology Society and signed with Arab Federation for Clinical Biochemistry, ensuring future closer collaboration.

EFLM Academy continued to grow, reaching the number of almost 10000 members by the end of 2023. All the benefits for Academy members were continued.

In 2023, EFLM continued with the EFLM Scholarship program in memory of Prof. Vic Blaton related to bursaries for meetings and conferences organized by EFLM. Also, the EFLMLabX professional exchanging program has been active and opened for applications.

COMMITTEES

Committee – Communication (C-C)

C-C has one working group (WG Promotion & Publications) and two task groups (TG European Laboratory Day and TG Young Scientists). In 2023, the Communication Committee's activities were organized through various functional units:

- **Working Group - Promotion & Publications (WG-PP):** Focused on promoting the field of clinical biochemistry and laboratory medicine. They developed and distributed EuroLab News (6 issues per year) EFLM newsletter. There were 4 news sections in the newsletter: The Young Scientist (YS) corner focused on promoting the Task Group for Young Scientists (TG-YS) and offering insights from young scientists on EuroMedLab 2023. EFLMLabX corner included promoting opportunities through EFLMLabX and featuring reports from EFLMLabX trainees. Additionally, the corner named Interviews with past EFLM presidents and senior officers, and a new section Focus on the EFLM Syllabus Course. This included a summary of all current modules, perspectives from key leaders about the syllabus, and viewpoints from the users, providing a comprehensive overview of these educational initiatives.
- **Task Group - Young Scientists (TG-YS):** Concentrated on engaging and supporting young professionals in the field. They organized networking event during Euromedlab in Rome and focused on building the network of young scientists that now encompasses more than 100 members. In the end of 2023, they elected the new TG-YS chair.
- **Task Group - European Laboratory Day (TG-ELD):** Dedicated to raising public awareness about the importance of laboratory medicine. They organized second European Laboratory Day, celebrated across 15 EFLM countries including Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Estonia, France, Italy,



Lithuania, Montenegro, Portugal, Serbia, Slovenia, Spain, and Turkey, was a significant event promoting laboratory medicine. The day featured a range of engaging activities such as laboratory tours, workshops and activities for children, and various laboratory-themed games. To increase awareness and participation, a special EuLabDay leaflet was created, complete with the event's logo and a list of proposed activities. Invitations were extended through direct mailings, and the event was widely promoted on social networks, encouraging widespread sharing. Highlighting the success and scope of the event, EuroLabNews issue 6-2023 and a dedicated EuLabDay2023 video was produced, showcasing the day's activities and its impact on promoting laboratory medicine in Europe.

Committee – Education and Training (C-ET)

Working group on congresses and postgraduate education (WG-CPE). WG-CPE was involved in recruiting new and “old” teams for postgraduate courses. Accordingly, one PGC on statistics in laboratory medicine was held in Valencia, Spain, and one PGC course on how **to write a good scientific and professional article** was postponed for February 2024 (Dublin, Ireland).

WG-CPE granted 2 online and 31 face-to-face auspices for different educational events in 2023. WG was also involved in the organization of the EFLM course “Lessons in Immunochemistry” and realized four online lessons (Fertility—the role of anti-Mullerian hormones; Anemia—the role of the laboratory in differential diagnosis; Hepatic Fibrosis—the role of laboratory biomarkers in diagnosis and monitoring and predicting the development of coronary artery disease in apparently healthy people). Additionally, WG-CPE was involved in the organization of the new course “Meet the Expert,” which should also be realized as an online course. In February, May, September, and November 2024. For 2024, WG-CPE also prepared and planned to establish a new channel on the online platform for “educational interactive contents.” This new channel should be used for interactive educational courses as well as for presenting and solving interactive clinical cases.

Working Group on Laboratory Medicine Credit Points (WG-LMCP).

To institute an EFLM credit system, the WG-LMCP was working on the development of a "Provider Application and Manual for EFLM Accreditation of Educational Programs" in conjunction with an administrative system called the Continuing Professional Education Credit System (CPECS). For the first time, the EFLM accreditation system (CPECS accreditation) was performed at the 25th IFCC-EFLM European Congress of Clinical Chemistry and Laboratory Medicine in Rome. CPECS® accreditation is planned to be established for the XXVI IFCC WorldLab Congress, jointly hosted by the IFCC, the Arab Federation of Clinical Biochemistry, the Saudi Society of Clinical Chemistry, and the UAE Genetics Association, May 26–30, 2024. The completed materials, which include a manual for providers, a manual for speakers, and different forms and documents, will be continued and be uploaded to the website of WG-LMCP as updates occur.

Working group on Distance Education (WG-DE). In cooperation with PCO (professional congress organizers), WG members were involved in planning and organization of 18 webinars in 2023. They already prepared a list of 22 new webinars for 2024.

In 2023, C-ET members were involved in EFLM bursary evaluation for the WorldLab–EuroMedLab Rome 2023. In addition, chairs of the C-ET and Science committees evaluated research grants that were previously established by the Executive Board. Two applications were granted, one for an applicant coming from a country enjoying the “Vic Blaton” scholarship program and the other for an applicant coming from any other country in Europe.

Committee – Profession (C-P)

The C-P activity in 2023 focused mainly in six objectives:

1. Progress with achieving recognition of Specialists in Laboratory Medicine
2. Growing the EFLM Register (EuSpLM)
3. Growing the EFLM Academy
4. EFLMLabX
5. TG: EFLM Syllabus Courses
6. Ethical issues: WG - Ethics (New)

According to the demand of Directive 2013/55/EC (Recognition of Professional Qualifications), we have presented the Common Training Framework for Specialists in Laboratory Medicine (CTF) document (published in CCLM in 2021) as a joint statement of the EU-based national societies, to the EU Commission. Aim to continue the process of achieving EuSpLM recognition. We had an online meeting with the EU Commission officer Olivier Lanoo, responsible for this Directive and professional regulation, on Sept 29 2023, where we also presented our progress and the actual situation. Unfortunately, at the moment, the situation is not ready for automatic recognition of our profession. Despite the big diversity of our profession and lack of common regulation in the EU, which the EU commissar has recognized as the main obstacle in this process, we decided to go on with our efforts to achieve our important goal.

In support of this process, the launch of the EFLM Academy, which is open to anyone (not just EFLM members) interested in laboratory medicine, proved successful. EFLM Academy offers a lot of benefits to its members, including free access to important Journals (CCLM, Clinical Chemistry Journal, Journal of Applied Laboratory Medicine, Critical Reviews in Clinical Laboratory Sciences Journal, Clinical Biochemistry Journal and Scandinavian Journal of Clinical and Laboratory Investigation), free access to CLSI documents (for block enrolled members), free access to EFLM Syllabus Courses with more than 350 lectures on all Syllabus topics, free access to EFLM webinars and much more. There are a few differences in the additional benefits of membership of the EFLM compared to non-EFLM Academy membership: enrollment in the EFLM EuSpLM register, which will only be possible by applying to the EFLM Academy and eligibility for EFLM grant applicants. All information about the Academy and its benefits is available on the EFLM website: <https://www.eflm.eu/site/eflm-academy> . Therefore, the number of Academy and EuSpLM register members is constantly growing, especially through block-enrolled NS. The number of registrants for the Academy increased steadily until the end of 2023 (+18% compared to 2022). The total number of members of the Academy is 7840 (with and without EuSpLM): through NS block enrollment (maximum share of registrants) (Total: 7130 (91%)) members, without EuSpLM certificate: 3260 (43%) members from total 7840; individual registration (Total: 710 (9%)), without EuSpLM registration: 694 out of 822). The total number of members of the Academy without EuSpLM, joined by both channels, moves from 3711 to 4580.

The WG-Register confirmed 348 more applications for EuSpLM Register in 2023 than in 2022 (total 3260), mainly achieved by block entry 3223 (99%) and 37 (1%) from individual applications.

By the end of 2023, a Memorandum of Understanding (MoU) for Academy/EuSpLM register group enrollment had been signed with 41/48 EFLM national societies (7 new in 2023: Czech Republic Affiliate(CSCB), Montenegro, France Affiliate (LABAC), Poland Sweeden, Luxemburg, Cyprus.

In 2022, the EFLM Academy Software renovation for easier management of the application was applied on the EFLM website. In 2023, all registration (**block enrollment** and **individual registration**) for the Academy and EuSpLM register have been successfully managed through this platform, where all applicants can retrieve their certificates.



The EFLM Committee on Professions conducts **an occasional audit to check that submitted individuals for the EuSpLM** certificate by the National Society meet the EFLM Equivalence of Standards. In 2023, WG-Register evaluated the first random check and ran the evaluation process of compliance of EuSpLM certificated candidates who have applied through NSs block enrollment way. For each NS with block enrollment, at the closure of the renewal process for 2023 (within Dec 10), the system automatically sends an e-mail with the name of the applicant for which the accurate personal documentation should be sent to WG-R for evaluation. 34 out of 37 Academy block enrolled NSs in January 2023 were with applied EuSpLM members and were involved in this first evaluation process (one candidate from each NS). 33 out of 34 randomly checked EuSpLM individuals complied with EuSpLM criteria.

The EFLMLabX practice exchange project continues with many new applications for the practices. The rising interest in the project, especially from young scientists, has shown the need for its growth. TG-EFLMLabX is taking care of support and development on the project activities. One of the most critical tasks is to attract more institutions/laboratories as the offerers of new practices. In 2023 5, new institutions joined the project as offerers (ANOVA Karolinska Institutet, University “Magna Graecia” of Catanzaro, MHAT University Hospital Clinical Laboratory, Oslo University Hospital and University of Crete (School of Medicine Dept. of Clinical Chemistry-Biochemistry). This year, six practices were implemented (in Spain, Germany, Greece, and Belgium). The project achieved significant support through the introduction of an EFLM Bursaries programme. We got six applications, and all of them have been confirmed.

In 2023, the **TG: EFLM Syllabus Courses** continued the project of Syllabus Courses. Courses are available on the EFLM Academy website as a part of the new e-learning platform for Academy members only. In 2023, the Virology module was completed, and several modules where individual lectures were missing were updated or completed.

C-P and Gilbert Wieringa published in 2023 as Guidelines and Recommendations an update of Code of Conduct: The European Register of Specialists in Clinical Chemistry and Laboratory Medicine: Code of Conduct, Version 3-2022 in CCLM.

A new Ethics Working Group has been established within the C-P to address several questions and topics on ethics in laboratory medicine (in clinical settings, research and experimental medicine) in accordance with the EFLM Code of Conduct in Laboratory Medicine.

C-P updated the site accordingly with any changes.

Committee – Quality and Regulations (C-QR)

Activities can be summarized along 3 main objectives:

Objective 1: The EU IVDR and the new ISO15189:2022

The Working Group Accreditation and ISO/CEN standards together with the Task Force on European Regulatory Affairs published on ISO15189 sufficiency for the IVDR-conform validation of the production and the putting to use of laboratory developed tests meant for in-house use.

ISO 15189 is a sufficient instrument to guarantee high-quality manufacture of laboratory developed tests for in-house-use conform requirements of the European In-Vitro-Diagnostics Regulation. Joint opinion of EFLM TF-ERA and WG-A/ISO

Vanstapel F.J.L.A, Orth M, Streichert T., Capoluongo E.D, Oosterhuis W.P, Can Çubukçu H, Bernabeu-Andreu F.A, Thelen M, Jacobs L.H.J, Linko S, Pal Bhattoa H, Bossuyt P.M.M, Meško Brguljan P, Boursier G, Cobbaert C.M and Neumaier M. Clin Chem Lab Med 2023.

<https://doi.org/10.1515/cclm-2023-0045>

In-house diagnostic devices under the EU IVDR and unwanted side-effects of intentional transparency

Vanstapel F.J.L.A., Boursier G., Cobbaert C.M., on behalf of the EFLM Task Force on European Regulatory Affairs and the EFLM Quality and Regulations Committee. Clin Chem Lab Med 2023. <https://doi.org/10.1515/cclm-2023-0750>

For 2024, the WG plans the detailed translation of IVDR requirements to the new version of the ISO15189:2022.

Objective 2: Auditable and defensible implementation of ISO-15189 requirements

The WG published

APS calculator: a data-driven tool for setting outcome-based analytical performance specifications for measurement uncertainty using specific clinical requirements and population data

Çubukçu Hikmet Can, Vanstapel Florent, Thelen Marc, van Schrojenstein Lantman Marith, Bernabeu-Andreu Francisco A., Meško Brguljan Pika, Milinkovic Neda, Linko Solveig, Panteghini Mauro and Boursier Guilaine. Clin Chem Lab Med, 2023. <https://doi.org/10.1515/cclm-2023-0740>.

This work expanded on earlier work on determining allowable between reagent lot variation (*van Schrojenstein Lantman M, Can Çubukçu H, Boursier G et al. Clin Chem Lab Med 2022.*

<https://doi.org/10.1515/cclm-2022-0083>)

In reply to: Limitations in using the EFLM WG-A/ISO approach for assessment of reagent lot variability.

Thelen Marc, van Schrojenstein Lantman Marith, Boursier Guilaine, Vanstapel Florent. Clin Chem Lab Med 2023. <https://doi.org/10.1515/cclm-2023-0516>

A paper on Retention time of laboratory documents, records and examination objects has meanwhile been accepted for publication in 2024, after it has been updated to the latest ISO15189 revision.

EFLM Working Group Accreditation and ISO/CEN standards on dealing with ISO15189 demands for retention of documents and examination objects.

Pika Meško Brguljan, Marc H.M. Thelen, Francisco A. Bernabeu-Andreu, Christos Kroupis, Guilaine Boursier, Ines Vukasović, Edward Barrett, Duilio Brugnoli, Maria Lohmander, Luděk Šprongl, Tatjana Vodnik, Irina Ghiță, Florent Vanstapel, Michel Vaubourdolle, Willem Huisman. Adv Lab Med 2024.

In 2023 the working group has decided to engage a project to produce guidance on the impact of the 2022 revision of ISO15189 for both laboratories and assessors, including confirmation or amendment of published guidance of the working group on the previous version of the standard.

Objective 3: The future of the Committee and WG

The 2023 CC asked to be relieved of his task, and prepared the transfer of tasks to the newly (2024) appointed CC (Marc Thelen) and transfer of the European Accreditation Health Care group liaison activity to the WG ISO/A chair (Guilaine Boursier). Other liaison activities to be decided in function of the next topic.

At our initiative, at the behest of the EFLM EB and in consultation with the CC Science and TFC ERA we prepared a revision of the Structure of the Committee and its Terms of Reference





and of its composing WGs. Aim of the revision, is to do right to do right to the output of the committee and WG which not only focusses on quality management sytemens, but also on how to use these systems to check whether requirements stipulated by other EFLM bodies such as the science committee and WGs, are effectively met. The redefinition is grossly along the lines of the two previous topics. Pending EFLM EB decisions we will implement these.

Committee – Science (C-S)

In 2023 the Science Committee of EFLM expanded to a total of 17 functional units, including 9 Working Groups (WGs), 5 Task Groups (TGs), and 3 Task and Finish Groups (TFGs):

- WG Artificial Intelligence (chair: Andrea Padoan, Italy)
- WG Autoimmunity Testing (chair: Xavier Bossuyt, Belgium)
- WG Biological Variation (chair: Sverre Sandberg, Norway)

TG Biological Variation Database (Aasne Aarsand, Norway)

- TG CKD (chair: Etienne Cavalier, Belgium)
- WG Harmonisation (chair: Martina Zaninotto, Italy)
- WG Patient Focused Laboratory Medicine (chair: Snezana Jovicic, Serbia)
- WG Postanalytical Phase (chair: Pieter Vermeersch, Belgium)
- WG Preanalytical Phase (chair: Janne Cadamuro, Austria)

TFG Hemolysis, Icterus and Lipemia interference (Rachel Marrington, UK)

- WG Test Evaluation (chair: Philip Monaghan, UK)

TG Performance Specifications Based on Outcome Studies (Rita Horvath, Australia)

- TFG Urinalysis (chair: Timo Kouri, Finland)

The new functional units established under this Committee in 2023 are:

- TG Practical Guide to Implement Measurement Uncertainty, initiated and chaired by Abdurrahman Coskun (Turkey),
- WG Biomarkers of mild Traumatic Brain Injury (mTBI) initiated and chaired by Vincent Sapin (France),
- TFG Biomarkers of Nitrous Oxide Abuse, initiated and chaired by Guillaume Grzych (France),
- TG Integrated Diagnostics: A New Interdisciplinary Frontier, a multidisciplinary group of representatives from the main diagnostic subspecialties (Laboratory Medicine, Radiology, Pathology) and Healthcare IT, chaired by Jochen Lennerz (USA).

The scientific outcome of scientific activities in 2023 includes 17 papers published or accepted (EFLM Recommendations, Position Papers and Survey Reports), 24 papers submitted or in preparation (including the updated European Urinalysis Guideline), 8 surveys conducted, and 35 invited lectures and webinars. The 5th CELME Symposium on Analytical Performance Specifications was organized in Prague (October 2023) and contributions were made to EuroMedLab Rome 2023 and other congresses such as the 16th Dresden Symposium on Autoantibodies (September 2023), the 60th European Renal Association ERA23 Congress (June 2023) and the LabQuality Days in Helsinki (February 2023).

The WG Biological Variation extended the number of new measurands and biological variation data sets published. The TG Biological Variation Database under this WG further developed the

EFLM Biological Variation Database and a guideline on how to perform and publish a biological variation study.

In 2023, final drafting of the European Urinalysis Guideline update was done by Timo Kouri and the multidisciplinary TFG Urinalysis including bacteriologists. This comprehensive document with 7 papers covering different areas and techniques of urinalysis was submitted for public consultation by ESCMID (European Society of Clinical Microbiology and Infectious Diseases), and the EFLM National Societies. After thorough work, a total of 245 comments have been addressed by this TFG and the revised guidelines have been sent to voting by the National Societies in November-December. Out of 41 voting National Societies, we have received 28 positive votes and 1 negative – the urinalysis recommendations can thus be considered officially approved EFLM guidelines.

New cooperations of several Science Committee's functional units with invited experts from other Societies and clinical specialists' groups were initiated: the Association for Diagnostics & Laboratory Medicine (ADLM), the European Renal Association (ERA), the European Society for Radiology (ESR) and European Society of Urogenital Radiology (ESUR), the European Cooperation in Science and Technology (COST) action “European Network on Optimising Treatment with Therapeutic Antibodies in chronic inflammatory diseases” (ENOTTA), the European Academy of Neurology (EAN), the European Society for Emergency Medicine (EUSEM) and the European Society for Emergency Nursing (EUSEN). Consensus recommendations of ERA (for measured GFR), EUSEM/EUSEN (for blood sampling in emergency medicine setting) and the ESUR Contrast Media Safety Committee (on analytical interference of contrast agents with laboratory tests) were endorsed by the EFLM in 2023.

Synergistic collaborations between functional units within the Science Committee were also strengthened. The WG Preanalytical Phase and WG Postanalytical Phase set the example by establishing joint collaborative projects for harmonization and – with the WG Artificial Intelligence – diagnostic A.I. applications in the extraanalytical phases. This alignment of functional units around common objectives – total testing process harmonization, A.I. and integrated diagnostics aiming for value-based laboratory medicine – will be the further way to go for the Science Committee to be reorganized accordingly in 2024.

TASK FORCES

Task Force - Green and Sustainable Laboratories

Completed activities of the EFLM Task Force “Green and Sustainable Labs” (2022)

1. The EFLM Task Force-Green and Sustainable Labs was established on November 17th, 2021, and its official establishment was announced to the
 - EFLM National societies,
 - EFLM and IFCC newsletters,
 - EFLM mailing list of 10000 contacts and announcement via socials.
2. **EFLM National Societies** were invited to name an officer acting as NS Representative for the Task Force-Green Labs. The EFLM National Societies appointed **49 National Society Representatives** in addition to the **Task Force-Green Labs members**.
<https://eflm.eu/site/page/a/1732>
3. The European Commission (EC) entitled European Green Deal (EGD) and DG-SANTE were informed about the establishment of the EFLM Task Force-Green Labs. They are following our activities closely. We are in close contact with them updating our further progresses.



4. **MedTech Europe** was informed at the same time. They were interested with the EFLM initiative and appointed their Senior Manager on “Environment & Sustainability” to the EFLM TF-Green Labs as a TF member.
5. A session was dedicated at the **EFLM Strategic Conference**.
<http://www.eflm-strategic-conference.eu/>
6. **Guidelines, Checklists, PowerPoints, video recordings** on main topics: Energy, Waste, Water, and Chemicals were completed. A logo was prepared, and ISBN code was received for the guidelines.
7. They were shared with the EFLM National Societies.

Completed Actions for the EFLM Task Force “Green and Sustainable Labs” (2023)

8. Guidelines in English were translated into French, German, Spanish, Turkish and Italian. Completed.
9. A mini website has been prepared for the TF-GSL. Completed.
10. Software was prepared for assessing the applications of laboratories. Completed.
11. Exams were performed for the National Society Representatives to become Green Lab Experts. Completed.
12. A call was launched to receive “Green and Sustainable Lab Certificate” applications from Laboratories. Completed.
13. Meetings with the National Societies (Presidents, National Representatives, members and experts). Completed.
14. A survey was performed with MedTech Europe to collect information on the potential emission and end-of-life of medical technologies containing Per- and poly-fluoroalkyl substances (PFASs). Completed.

Ongoing Actions for the EFLM Task Force “Green and Sustainable Labs” (2023)

15. Evaluation/assessment of labs applying for Green Lab certificates have been started. Ongoing.
16. EFLM Green and Sustainable Lab Certificates are given to the laboratories fulfilling the EFLM Green Lab requirements. Ongoing.
17. IVD companies have been invited to support financially the laboratories for EFLM Green Lab certificates. Ongoing.
18. A Type 2 paper on PFAS has been submitted to the CCLM as EFLM Type 2 paper. under printing.
19. Several Congresses have been attended worldwide in-presence and on-line to give information and promote EFLM GSL program. Ongoing.
20. Organization of a Workshop. Under preparation.

Task Force - European Regulatory Affairs (TF-ERA)

The Task Force ERA holds 10 members, 8 regular members and 2 corporate members. Four out of the 8 regular members are also EFLM observers in the MDCG WG IVD or in the MDCG Emerging Technology WG. On behalf of Medtech Europe both the CEO and another Medtech Representative participate. Six zoom meetings and one live meeting (during Euromedlab in Rome, May 2023) have taken place in 2023.

Major accomplishments of the TF are that members are periodically scanning the opportunities and the challenges of the current IVDR role out for the laboratory medicine discipline.



Notwithstanding the phased role out of the IVDR ongoing signals come to the TF members regarding the fact that the big IVD-companies can deal with the IVDR in an adequate way whereas the SMEs are unanimously struggling with the unpredictability of the process (not getting a contract with a Notified Body (NB) and/or uncertain time paths), high costs for the technical assessments by the Notified bodies and lack of ROI. This leads to discontinuation of niche and orphan disease tests, and bringing innovative tests more and more to non-EU markets. Surveys on the current situation have been done by Medtech Europe and also by TEAM-NB. Some national competent authorities also examined the current situation and the uncertainties that the incomplete EU-regulatory system brings for SMEs. Diagnostic laboratories will also be affected by the IVDR as lab specialists are not proactively informed, which may cause unavailability of essential tests now and in the future. It is anticipated that the medical labs cannot fill the gap in case of massive discontinuation of low-volume, essential tests.

Awareness is created by the TF ERA through on demand lectures and panel discussions in different EU member states. Publications have been written to support lab professionals with practical recommendations on how to embed Art 5.5 and Annex I requirements for LDTs in the ISO 15189 QMS.

Under the umbrella of BioMed Alliance the EFLM TF ERA group started exploring the feasibility of EFLM becoming a partner in a huge consortium working on the EU call HORIZON-HLTH-2024-IND-06-08: developing EU methodological frameworks for clinical performance/evaluation and post-market clinical performance/follow-up of medical devices and IVDs. Clinical societies are occupied with the MDR part of the call whereas EFLM, ESHG and EHA work on the IVDR part of the call.

Such methodological frameworks and standardized approaches are particularly needed for high-risk medical devices, e.g. implantable and class III medical devices, class C and D IVDs, medical device software (including AI enabled devices and next generation sequencing) and other highly innovative devices.

Proposals should build on relevant completed and ongoing initiatives in the field, in particular (but not restricted to) EU-funded initiatives. Proposals should involve researchers who are specialized in the clinical/performance evaluation of medical devices/IVDs and in the use of real-world data to evaluate medical products. Proposals should involve national competent authorities, notified bodies, IVD laboratories as well as Health Technology Assessment bodies and could involve patients' representatives where relevant. The EU-call proposal has to be submitted by April 2024.

Task Force - Preparation of Labs for Emergencies

The EFLM TF – Preparation of Labs for Emergencies (TF-PLE) was established on January 1, 2023, as a Strategic Activity of EFLM according to the Strategic Plan 2022-23. The TF aims to open a large debate and prepare a set of documents that may facilitate clinical laboratories and healthcare systems in Europe to be prepared for the most devastating scenarios originating from various types of emergencies. The TF is chaired by Giuseppe Lippi, and it has 9 core group members and 11 national societies' representatives. During the first year, the TF conducted two surveys in EFLM countries to understand the state-of-the-art lab preparation for emergencies across Europe and possibly identify (or set) the benchmark. The results of these surveys were published in *Clinical Chemistry Laboratory Medicine* and in *eJIFCC*. Based on these results, the TF will define priority areas (i.e., type of emergencies) to become specific targets of laboratory medicine emergencies and provide indications on suitable strategies to prepare laboratory medicine facilities to face emergencies. In light of the recent cyber attacks on several hospitals worldwide, at the end of 2023 the TF also prepared and launched a survey on the vulnerability of healthcare to cyber attacks among the EFLM countries.



Task Force - Direct-to-Consumer Testing

On June 1st, 2023, the EFLM TF Direct-to-Consumer Testing was launched. This task force consists of a “core group” (Tomris Ozben, Mario Plebani, Sverre Sandberg, Delphine Sartiaux (from Medtech Europe), Patti Shih and Matthias Orth (Chair)) and of 11 national societies’ representatives.

The TF held Webex meetings on June 15, 2023, on October 4, 2023, and on November 27, 2023. In addition, they met face-to-face in Copenhagen on August 24-25, 2023. The ongoing work of the task force focuses on the definition of DTCT and in particular on certain DTCT tests which are regarded to be acceptable (i.e. not harming the users of these tests). The TF is currently working on a statement paper and on a survey.

Invited lectures were delivered on July 26, 2023 (AACC, Anaheim), October 12, 2023 (DGKL, Mannheim) and November 17, 2023 (LBMR, Paris).

MEETINGS

These are the EFLM live events that took place in 2023:

- EuroMedLab 2023 - Rome (IT), 21-25 May 2023
25th IFCC-EFLM European Congress of Clinical Chemistry and Laboratory Medicine
- 5th Symposium CELME 2023 - Prague (CZ), 12-13 October 2023
Analytical Performance Specifications (APS): moving from models to practical recommendations
- EFLM Postgraduate Course - Valencia (SP), 30 November – 1 December 2023
Biostatistics in Laboratory Medicine

WEBINARS

EFLM has organized several Webinars during 2023, thanks to the new EFLM e-learning platform:

- 10/01/2023 - Evidence-based laboratory medicine
- 07/02/2023 - "Fast and furious" - integration of (not only) molecular methods for faster results in the microbiology lab
- 28/02/2023 - Cerebrospinal fluid biomarkers for neurodegenerative dementias
- 07/03/2023 - Diagnosis of Gaucher disease and other lysosomal disorders
- 21/03/2023 - Monitoring the performance of a measurement system for its intended clinical use
- 04/04/2023 - Applied genetic methods in reproductive disorder
- 11/04/2023 – Lessons in Immunochemistry: Fertility: the role of Anti Mullerian Hormone
- 18/04/2023 - The future of laboratory lies beyond its wall
- 09/05/2023 - The Clinical Utility Of Medical Tests
- 30/05/2023 - Cushing syndrome and its biological work up
- 13/06/2023 - Machine learning based clinical decision support using laboratory data
- 20/06/2023 - Maintaining Quality with Digital Pathology
- 27/06/2023 - Lessons in Immunochemistry: Anemia
- 11/07/2023 - The use of metabolic bone markers in childhood

- 12/09/2023 - Digital Transformation: What to do and How to do
- 19/09/2023 - Semen and sperm examination as a tool to investigate the man – validation of new methods
- 28/09/2023 - Hepatic fibrosis - the role of laboratory biomarkers in diagnosis and monitoring
- 10/10/2023 - Current concepts for early diagnosis of malignant disease
- 24/10/2023 - Nutrition and biochemistry
- 07/11/2023 - The diagnostic abilities of POC instruments
- 28/11/2023 - Implementation of sustainable practices in medical laboratories switching Clinical Laboratories to Green Labs
- 06/12/2023 - Coronary Artery Disease - Predicting the development of coronary artery disease in apparently healthy individuals - the role of Lp (a)
- 13/12/2023 - Biomarkers of sepsis: procalcitonin and more

PUBLICATIONS

Assessing the status of European laboratories in evaluating biomarkers for chronic kidney diseases (CKD) and recommendations for improvement: insights from the 2022 EFLM Task Group on CKD survey

Cavalier E., Makris K., Portakal O., Nikler A., Datta P., Zima T., Delanaye P. and for the EFLM Task Group on CKD

Clin Chem Lab Med 2023 <https://doi.org/10.1515/cclm-2023-0987>

In-house diagnostic devices under the EU IVDR and unwanted side-effects of intentional transparency

Florent J.L.A. Vanstapel F.J.L.A., Boursier G., Cobbaert C.M., on behalf of the EFLM Task Force on European Regulatory Affairs and the EFLM Quality and Regulations Committee

Clin Chem Lab Med 2023 <https://doi.org/10.1515/cclm-2023-0750>

Potentials and pitfalls of ChatGPT and natural-language artificial intelligence models for the understanding of laboratory medicine test results. An assessment by the EFLM WG on Artificial Intelligence (WG-AI)

Cadamuro J, Cabitza F, Debeljak Z, De Bruyne S, Frans G, Martin Perez S, Ozdemir H, Tolios A, Carobene A and Padoan A

Clin Chem Lab Med 2023 <https://doi.org/10.1515/cclm-2023-0355>

Recommendation for the design of stability studies on clinical specimens

Gomez-Rioja R, Von Meyer A, Cornes M, Costelloe S, Vermeersch P, Simundic AM, Nybo M, Stuart Baird G, Kristensen GBB and Cadamuro J, on behalf of the European Federation of Clinical Chemistry and Laboratory Medicine (EFLM) Working Group Preanalytical Phase (WG-PRE)

Clin Chem Lab Med 2023 <https://doi.org/10.1515/cclm-2023-0221>



An international study on activated partial thromboplastin time prolongation. Part 1: Analytical results
Bauça JM, Ajzner E, Cadamuro J, Hillarp A, Kristoffersen AH, Meijer P; Working Group on the Postanalytical Phase of the European Federation of Clinical Chemistry and Laboratory Medicine (EFLM)

Clinica Chimica Acta 2023 doi: 10.1016/j.cca.2022.08.024

An international study on activated partial thromboplastin time prolongation. Part 2: Interpretative commenting

Bauça JM, Ajzner E, Cadamuro J, Hillarp A, Kristoffersen AH, Meijer P; Working Group on the Postanalytical Phase of the European Federation of Clinical Chemistry and Laboratory Medicine (EFLM)

Clinica Chimica Acta 2023 doi: 10.1016/j.cca.2022.08.026

Efficiency, efficacy and subjective user satisfaction of alternative laboratory report formats. An investigation on behalf of the Working Group for Postanalytical Phase (WG-POST), of the European Federation of Clinical Chemistry and Laboratory Medicine

Cadamuro C, Winzer J, Perkhofer L, von Meyer A, Bauça JM, Plekhanova O, Linko-Parvinen A, Watine J, Kniewallner KM, Keppel MH, Šálek T, Mrazek C, Felder TM, Oberkofler H, Haschke-Becher E, Vermeersch P, Kristoffersen AH and Eisl C.

Clin Chem Lab Med 2023 <https://doi.org/10.1515/cclm-2022-0269>

CCLM Special Issue dedicated at the 3rd EFLM Strategic Conference: Implementing Emerging Technologies, IVDR, and Sustainable Practices in Smart and Green Medical Laboratories. Opportunities and Challenges

Issue Editor: Tomris Özben

Clin Chem Lab Med 2023;61:531-708

The European Register of Specialists in Clinical Chemistry and Laboratory Medicine: code of conduct, version 3 – 2023

Queraltó J, Brady J, Carobene A, Homšak E, Wieringa G.

Clin Chem Lab Med 2023 <https://doi.org/10.1515/cclm-2023-0031>

ISO 15189 is a sufficient instrument to guarantee high-quality manufacture of laboratory developed tests for in-house-use conform requirements of the European In-Vitro-Diagnostics Regulation. Joint opinion of EFLM TF-ERA and WG-A/ISO

Vanstapel F.J.L.A, Orth M, Streichert T., Capoluongo E.D, Oosterhuis W.P, Can Çubukçu H, Bernabeu-Andreu F.A, Thelen M, Jacobs L.H.J, Linko S, Pal Bhattoa H, Bossuyt P.M.M, Meško Brguljan P, Boursier G, Cobbaert C.M and Neumaier M

Clin Chem Lab Med 2023 <https://doi.org/10.1515/cclm-2023-0045>

Performance specifications for sodium should not be based on biological variation

Oosterhuis WP, Coskun A, Sandberg S, Theodorsson E.

Clinica Chimica Acta 2023 doi: 10.1016/j.cca.2023.117221

Snežana Jovičić, EFLM Executive Board Secretary

NAFCC North American Federation of Clinical Chemistry and Laboratory Medicine

The NAFCC represents two North American organizations on the IFCC Executive Board (IFCCCEB), the Association for Diagnostics and Lab Medicine (ADLM) and the Canadian Society of Clinical Chemists (CSCC).

NAFCC selected Dr. Ted Dunn as representative to fill the place of Dr. Stephen Hill. Dr. Dunn served until December 2023. Dr. David Grenache was appointed as the NAFCC representative beginning in January 2024 and serving until December 2026.

The CSCC conducted its annual conference in Winnipeg, Manitoba from June 18–21, 2023, and ADLM held its Annual Scientific Meeting and Clinical Lab Expo in Anaheim, CA from July 23–27, 2023.

The CSCC will hold its 2024 joint scientific meeting with the Société Québécoise de Biologie Clinique (SQBC) from June 16–19, 2024, and the ADLM will hold its Annual Meeting and Clinical Lab Expo from July 28–August 1, 2024.

ADLM and CSCC will jointly hold a meeting in 2025 in Chicago, USA.

Members of the NAFCC maintain memoranda of understanding with several national societies for the purposes of mutually beneficial education exchanges, partnerships that include the Mongolian Association of Health Laboratorians (MAHL), Biomedical Society of Zambia (BSZ), Sociedad Ecuatoriana de Bioquímica Clínica (SEBIOCLI), Colegio Nacional de Bacteriología CNB—Colombia and Cameroon Society for Clinical Biologists. CSCC paid IFCC dues for the Cuban Society

Some regional events include the following:

- Preanalytical Phase Conference: Implementing Preanalytical Tools That Improve Patient Care (October 20–21, 2023)
- The POCT Conference: Putting Tools into Practice: Addressing Problems in Your Point-of-Care Testing Program (November 2, 2023)
- AACC Middle East (October 7–8, 2023)
- CSCC has provincial chapters that hold annual conferences.

NAFCC members have offered 3 online courses, 12 certificate programs, 20 webinars, 1 lectureship series, 1 Clinical Chemistry Training Program, 1 Leadership in Quality Management Certificate Program and 6 workshops.

Edward Dunn, NAFCC Representative



Full Member Societies



ALGERIA SOCIÉTÉ ALGERIENNE DE BIOLOGIE CLINIQUE (SABC)

Introduction: The Algerian National Association of Medical Laboratories (ALAM) exhibited remarkable activity throughout the year 2024, orchestrating a multitude of events dedicated to advancing research, promoting knowledge-sharing, and fostering professional development in the realm of practical biology.

I. Major Events:

- 4th Congress of Practical Biology (24/02/2023): ALAM orchestrated the successful 4th Congress of Practical Biology on February 24, 2023. This landmark event convened professionals in medical biology, providing a platform for the exchange of ideas, presentation of research work, and discussions on the latest advancements in the field.
- 8th Days of the International Francophone Federation of Clinical Biology and Laboratory Medicine (24/02/2023): On the same date, ALAM played a pivotal role in hosting the 8th Days of the International Francophone Federation of Clinical Biology and Laboratory Medicine. This event facilitated international collaboration and the exchange of ideas among professionals in the field.
- Scientific Seminar (06/09/2023) - Hematology and Biochemistry: A comprehensive scientific seminar focusing on Hematology and Biochemistry took place on September 6, 2023. This session delved into crucial areas of medical laboratory sciences, offering an in-depth exploration of pertinent topics.
- 2nd Medical Biology Day (02/10/2023): ALAM organized the 2nd Medical Biology Day on October 2, 2023, aimed at showcasing the latest advancements and best practices in the field of medical biology.
- 1st Tunisian-Algerian Medical Biology Days (24/11/2023) - Respiratory Infections (International On-Site Event): On November 24, 2023, the 1st Tunisian-Algerian Medical Biology Days focused on Respiratory Infections, bringing together experts and practitioners for discussions and insights on managing respiratory infections.

II. Training Webinars:

ALAM further contributed to professional development through a series of training webinars covering various pertinent topics.

- Training Session (17/01/2023) - Immunohematological Monitoring of Pregnant Women: On January 17, 2023, a session dedicated to the Immunohematological Monitoring of Pregnant Women provided valuable insights into ensuring the health and well-being of pregnant individuals through immunohematological assessments.
- Training Session (13/06/2023) - Endocrine Disruptors: On June 13, 2023, a training session centered on Endocrine Disruptors took place, addressing their impact and implications on health and offering insights into their identification and management.
- Training Sessions (07/09/2023 - 21/11/2023): Additionally, ALAM conducted various training sessions throughout the period, covering themes such as the challenges of hCG assay, etiological assessment of venous thromboembolic disease, diagnostic and therapeutic innovations for *Helicobacter pylori*, updates on HLA typing in 2023, and shedding light on free light chains.

- Training Session (07/12/2023) - Study of Vaginal and Endometrial Microbiomes: Why? For Whom? The final training session on December 7, 2023, explored the reasons and benefits of studying vaginal and endometrial microbiomes, providing an insightful perspective on this topical subject.

Conclusion: In conclusion, ALAM's unwavering commitment to advancing practical biology is evident through its organization of significant events, the dissemination of knowledge, and the facilitation of expertise-sharing within the community of medical laboratories, both in Algeria and on the international stage.



ARMENIA ASSOCIATION OF MEDICAL LABORATORY DIAGNOSTICS SPECIALISTS (AMLDS)

NATIONAL MEETINGS

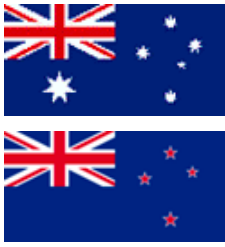
<i>Name of the meeting</i>	<i>Date</i>	<i>Topic</i>
Training Course, seminar	15.02.2023	Topic" Preanalytical phases best practice for laboratory examinations, sample quality assurance"
Training Course, seminar	21.06.2023	Topic "Types of quality control in clinical diagnostic laboratories"
Congress of Armenian Medical Association (AMA)	29.06.2023	Report of activities for last 2 years of AMA. Election of new president and new board members of AMA. Alvard Avanesyan from AMLDS was elected as AMA board member
Seminar and tripartite meeting with representatives of the Labor inspections and the Ministry of Health RA	30.06.2023	Topic" New regulation N:14-N of RA Ministry of Health of April 23, 2023"
Reporting meeting for last 5 years of AMLDS	21.07.2023	"Report of work done"
AMLDS Board meeting	13.09.2023	Topic" The changes of some aspects of the AMLDS's charter, the new president and new board members election's necessary
Meeting with BioMerieux	28.10.2023	Topic" Morning with bioMerieux, Syndromic approaches in microbiological diagnosis"
Seminar	02.12.2023	Topic" Microbiology problems and modern solutions"
AMLDS Board meeting	22.12.2023	Topic-call a AMLDS assembly meeting in 10.01.2024, for final approval of changes in the association regulation and structure, and the election of new president and new board members

REGIONAL RELATIONS

Armenian Medical Association (AMA), cooperation agreement
Federation of Laboratory Medicine of Russia (FedLab), cooperation

INTERNATIONAL RELATIONS

IFCC, cooperation agreement



AUSTRALIA & NEW ZELAND AUSTRALASIAN ASSOCIATION FOR CLINICAL BIOCHEMISTRY AND LABORATORY MEDICINE (AACB)



NATIONAL MEETINGS

<i>Name of the meeting</i>	<i>Date</i>	<i>Topic</i>
AACB-RCPA Harmonisation Workshop	20-21 July 2023	Towards pathology harmonisation
Quality Control Statistics Workshop	16 October 2023	Quality Control in the laboratory
AACB 58 th Annual Scientific Meeting	17-19 October 2023	Theme: "Patient-centred pathology"
Chromatography Mass Spectrometry Satellite Meeting	20-21 October 2023	Chromatography & Mass Spectrometry

EDUCATION

- RCPA-AACB Chemical Pathology Course –February 2023 – covered AACB Education curriculum topics for both the AACB and Royal College of Pathologists Australasia.
- Branch-based scientific events held throughout the year, either face-to-face or in webinar format.
- Roman Lecture series – Prof Sverre Sandberg provided presentations at venues across Australia for AACB Members and other interested members of the laboratory medicine community.
- AACB Virtual Study Group 2023 ran 20 very successful on-line tutorials between February and November for AACB Members.

REGIONAL RELATIONS

Asia Pacific Federation of Clinical Biochemistry and Laboratory Medicine

AACB will host the 2024 APFCB Congress in Sydney, 31 October to 3rd November 2024. Preparations are well underway with the program and pre-Congress workshops already being advertised at <https://apfcbcongress2024.org>.

The Congress is now open for registrations and submission of abstracts.

Reduced registration fees are offered for retired Members, students and registrants from low-income countries (see website for details).

AACB Members contributing to APFCB

<i>Committee</i>	<i>Committee</i>
APFCB Executive Board	
President	Tony Badrick
Vice President	Samuel Vasikaran
Scientific Committee	
Chair	Tze Ping Loh

Scientific Working Groups	
Paediatric Clinical Biochemistry - Mass Spectrometry Harmonisation	Ronda Greaves (Chair)
Patient based Quality Control	Tony Badrick (Chair)
Harmonisation of Reference Intervals	Tze Ping Loh (Chair)
Clinical Decision Support	Kay Weng Choy (Chair)

ADDITIONAL INFORMATION

The year 2023 saw a number of changes to the AACB:

- Tina Yen finished her term as AACB President, being replaced by Greg Ward. Tina now becomes the AACB Past President.
- Two longstanding members of the AACB Executive Committee, Peter Graham (Vice President Finance and Branches) and Peter Vervaart (Vice President Media and Communications), stepped down as Officers of the Association.
- Peter Graham, Peter Vervaart and Peter Ward (Previous AACB President) were awarded the inaugural Presidential Medal for exemplary service and commitment to the AACB.
- Pathology Tests Explained, is a highly regarded pathology information website developed for Australian consumers over many years by the AACB under the management of Andrew St John and team. This website has been integrated into the Australian Federal Government Department of Health and Aging MyHealthRecord as primary source of authoritative information on pathology tests.
- In 2023, Pathology Tests Explained also became a public company limited by guarantee.
- In 2023, AACB Members voted overwhelmingly in favour of moving from being an Incorporated Association to a public company limited by guarantee. The transition will occur on 17th January 2024.



AUSTRIA AUSTRIAN SOCIETY OF LABORATORY MEDICINE AND CLINICAL CHEMISTRY (ÖGLMKC)

NATIONAL MEETINGS

Name of the meeting	Date	Topic
SYMPOSIUM LABORMEDIZIN SEGGAUBERG BEI GRAZ	May 7-8, 2024	Integrated diagnostics and advanced patient management in the ageing society
13 th International Symposium on Molecular Diagnostis - ISMD2024	June 13-14, 2024	Molecular Diagnostis



BELGIUM
ROYAL BELGIAN SOCIETY
OF LABORATORY MEDICINE (RBSLM)

NATIONAL MEETINGS

<i>Name of the meeting</i>	<i>Date</i>	<i>Topic</i>
Annual national meeting RBSLM	Nov 17 2023	Symphony of the heart

ADDITIONAL INFORMATION

We prepare the next EFLM meeting in Brussels 2025



CANADA
CANADIAN SOCIETY OF CLINICAL CHEMISTS (CSCC)
SOCIÉTÉ CANADIENNE DE CLINICO-CHIMISTES

NATIONAL MEETINGS

<i>Name of the meeting</i>	<i>Date</i>	<i>Topic</i>
CSCC Annual Conference 2023	June 18-21, 2023	CSCC Annual Meeting held jointly with The Canadian College of Medical Geneticists (CCMG) Winnipeg, Manitoba
Upcoming meeting in 2024: CSCC Annual Conference	June 16-19, 2024	CSCC Annual Meeting held jointly with La Société québécoise de biologie clinique (SQBC) Mont Sainte-Anne, Quebec
Upcoming meeting in 2025: CSCC Annual Conference	July 27-31, 2025	CSCC Annual Meeting held jointly with the Association for Diagnostics & Laboratory Medicine (ADLM) Chicago, Illinois

EDUCATION

2023 Travelling Lectureship Series

Speaker: Dr. Nitika Pant Pai, MD MPH PhD, Associate Professor, Department of Medicine, Division of Clinical Epidemiology, and Principal Investigator, Research Institute of the Centre for Outcomes Research & Evaluation (RI-MUHC), McGill University

Topic: Quoi de Neuf? Diagnostic Technologies and Digital Solutions for Transformation and Impact

Dr. Pant Pai delivered her lectures to a number of different sites across Canada, both in-person and virtually, during Fall 2023.

The lectureship is sponsored by Bio-Rad Laboratories.

CSCC Webinar Lectureship on Critical Care Medicine

Speaker: Deborah Siegal MD MSC FRCPC, Associate Scientist, The Ottawa Hospital Research Institute

Topic: Anemia in Hospitalized Patients: Vampirism and Other Tales

March 16, 2023

Lectureship sponsored by Roche.



QuidelOrtho Industry Workshop

Speakers: Rob Christenson PhD, Professor of Pathology, Professor of Medical and Research Technology, University of Maryland School of Medicine

Topic: High Sensitivity Troponin Testing: Decentralized, Dependable and No Compromise in Quality

January 25, 2023

Webinar sponsored by QuidelOrtho.

2022-23 Education Roundtable Webinar Series

13 CSCC “Education Roundtable” in webinar format were held twice a month from September 2022 to May 2023. Over 100 participants attend each session.

2023-24 Education Roundtable Webinar Series

17 CSCC “Education Roundtables” in webinar format will be held twice a month from September 2023 to May 2024. Over 100 participants attend each session.

Special Interest / Working Groups

CSCC has 11 special interest / working groups which are communities with an interest in advancing a specific area of knowledge, learning or technology where members cooperate to affect or to produce solutions within their particular field. The activities usually consist of communication between conferences and informal sessions within the CSCC conference. These groups also develop position statements and guidelines, and present educational webinars.

Leadership In Quality Management Certificate Program

The purpose of this Program is to bring Clinical Biochemists, as laboratory leaders, to a level required to provide competent leadership and oversight to the quality management systems (QMS) in their laboratory. The certificate Program is presented as an on-line course in quality management. CSCC trainee members are offered the option to register in the program at no charge. This event is an accredited group learning activity as defined by the CACB/CSCC Professional Development Program.

Participants have two years to complete the program.

CACB Professional Development Program

The Maintenance of Competence Committee oversees the continuing professional development (PD) program designed by the Canadian Academy of Clinical Biochemistry to encourage and support the lifelong learning needs of its Fellows and other healthcare professionals who are in the practice of clinical chemistry. The program uses accreditation of continuing professional development events, establishes an ongoing PD program for continuing education credits, and conducts audits of PD credit submissions as a means of meeting this goal.

Clinical Biochemistry Journal

CSCC is the owner of the scientific journal Clinical Biochemistry which is published by Elsevier. There are 12 issues per year and the website is: <https://journals.elsevier.com/clinical-biochemistry>

Clinical Chemistry Training Programs

The Canadian Academy of Clinical Biochemistry has accredited six Postdoctoral Training Programs in Clinical Chemistry across Canada: University of Toronto, McMaster University, Université de Montréal, University of Manitoba, University of Calgary, University of Alberta. These programs are directed toward acquiring professional competence as well as a small research complement.





In 2023, CSCC awarded a provisional 2-year accreditation to two new Postdoctoral Training Programs at the University of Saskatchewan and Memorial University of Newfoundland.

Clinical Chemistry Knowledge (CliCK) Study Tool

CSCC launched the CliCK Study Tool, a collection of Anki flashcard decks of short questions and answers, including several topics in laboratory medicine and clinical chemistry. The Anki software incorporates an evidence-based educational approach to recall information and is being specifically used in medical education and endorsed by education experts due to its effectiveness.

REGIONAL MEETINGS

<i>Name of the meeting</i>	<i>Date</i>	<i>Society's contribution for the meeting</i>
Ontario Society of Clinical Chemists (OSCC) 2023 Annual Meeting	October 12-13, 2023 Kitchener, Ontario	Hosted and planned by the Ontario regional society of CSC
Alberta Society of Clinical Chemists (ASCC) 2023 Annual Meeting	October 13, 2023 Calgary, Alberta	Hosted and planned by the Alberta regional society of CSCC

REGIONAL RELATIONS

CSCC has 8 Provincial Sections – British Columbia, Alberta, Saskatchewan, Manitoba, Ontario, New Brunswick, Nova Scotia, and Newfoundland & Labrador. Each Section holds its own meetings and small conferences. The Sections report annually to the Society Council. A Provincial Grant is available for each section to help fund their activities.

CSCC held its annual conference as a joint meeting with the Canadian College of Medical Geneticists (CCMG) in 2023 in Winnipeg, Manitoba.

CSCC will hold its annual conference as a joint meeting with La Société québécoise de biologie clinique (SQBC) in 2024 in Mont Sainte-Anne, Quebec.

INTERNATIONAL RELATIONS

CSCC will hold its annual meeting jointly with the American Association for Clinical Chemistry (AACC) in 2025 in Chicago, USA.

CSCC paid the IFCC membership dues of the Cuban Society.

CSCC, with AACC, is a member of the North American Federation of Clinical Chemistry and Laboratory Medicine (NAFCC) of IFCC. The NAFCC is represented at the IFCC Executive Board meetings. Dr. Ted Dunn of Ontario Canada is the current NAFCC representative.

Dr. Khosrow Adeli, Past-Chair of the Canadian Academy of Clinical Biochemistry, is the current President of IFCC.

Dr. David Kinniburgh, Past-President of CSCC, is the current Secretary of IFCC.

Dr. Allison Venner, CSCC President, attended the IFCC General Council (October 26-30, 2022) as the national representative for CSCC.

There are several Canadian members on IFCC committees and each of these members is asked to provide a report to CSCC Council at least annually.

ADDITIONAL INFORMATION

External Representation

The CSCC:

- Has diverse representation on external professional groups, including IFCC, the Canadian Standards Association, the JCTLM Working Group for Traceability, Education and Promotion, the Canadian Society of Nephrology Task Force on eGFR Reporting, and the Diabetes Technology Society (iCode).
- Has a number of interactions with other Canadian pathology and lab medicine groups including, 'Choosing Wisely Canada' (<http://www.choosingwiselycanada.org/>)
- Supports LabCanDx (formerly MEDEC), the national association for the Canadian medical technology industry, in their efforts to promote the value of laboratory medicine and supports participation in ToxLRN which is an initiative by Health Canada to create a network of toxicology laboratories in Canada.
- Provides support and professional encouragement for Trainees and Young Scientists, such as travel grant funding and a special reception at the annual conference. CSCC also provides Trainee Elective Visit Grants which support short-term elective visits to other labs to provide lab medicine trainees with a unique opportunity to augment their skill sets.
- Holds an annual charity run at its annual conference and proceeds are donated to a local charity.
- Publishes a bi-monthly newsletter.
- Has a Public Outreach Division which is actively working on promoting the profession of clinical biochemistry in Canada.
- Has a Podcast program and in 2022 nine podcasts were produced. <https://csc.ca/en/chemist-library/the-lab-report.html>
- Launched an updated website in 2023. <https://www.behance.net/>



CHILE SOCIEDAD CHILENA DE QUÍMICA CLÍNICA (SCHQC)

EDUCATION

- IFCC Live Webinar Laboratory Medicine and its challenges in low- and middle-income countries redefining its leadership impact of laboratory tests and advantages of clinical laboratory 4.0 Fourth industrial revolution “smart factory” clinical laboratory: Challenges and opportunities Leverton Ortiz, March 29, 2023
- Webinar COLABIOCLI Indicadores de Calidad: ¿Que son y como se implementan en el laboratorio clinico? Leticia Luna. 18 July 2023
- Webinar COLABIOCLI Inteligencia artificial en ciencias de la salud: Oportunidades en el laboratorio clinico. Natalia Serrano and Paulina Ruiz. 29 August 2023
- Webinar de la Confederación Latinoamericana de Bioquímica Clínica (COLABIOCLI) “The Community Cohort:Estudio de cohorte prospectivo sobre la respuesta inmune humoral de adultos con riesgo cardiovascular expuestos a antígenos de SARS-COV-2”, Expositor: Vivianne Bachelet. 26 September 2023
- Curso internacional de Micología. (SBAC) Control de la Calidad en micología médica. Victor Silva. 20 October 2023
- Curso-Taller Proceso Preanalítico : Revision enfocada en la seguridad del paciente. Coordinador: Leverton Ortiz, Universidad Santo Tomas, 1-2 December 2023
- Webinar of WG Nuevos paradigmas y trasdisciplina en el laboratorio clinico. Inteligencia artificial, machine learning y Sistema de soporte la toma de decision medica. Enrique Guzman. 19-20 December 2023

REGIONAL MEETINGS

<i>Name of the meeting</i>	<i>Date</i>	<i>Society's contribution for the meeting</i>
2 ^{da} Conferencia Latinoamericana de Jóvenes profesionales del Laboratorio Clínico. Florianópolis, Brasil	18 June 2023,	Disbiosis vaginal y desordenes a nivel de la salud mental. Expositor: Natalia Serrano
1 ^{er} Congreso científico de laboratorio clínico. Managua. Nicaragua	1-2 July 2023	Diagnostico de laboratorio de las disfunciones plaquetarias y la enfermedad de von Willebrand. Expositor: Eduardo Aranda
53 Congreso de la Sociedad Brasileña de Patología Clínica y Medicina de laboratorio. Sao Pablo, Brasil.	4-8 September 2023	Use of AI for the early diagnosis Of gestacional diabetes Mellitus. Expositor: Enrique Guzman
X Congreso internacional y XIV Congreso Ecuatoriano de Bioquímica Clínica. Cuenca, Ecuador	26-28 October 2023	Coagulopatias autoinmunes. Expositor: Eduardo Aranda
X Congreso internacional y XIV Congreso Ecuatoriano de Bioquímica Clínica. Cuenca, Ecuador	26-28 October 2023	<ul style="list-style-type: none"> • Importance of the clinical laboratory in the detection of drugs of abuse in the workplace • Management pre-analytical process. Maria Elena Arredondo. VLP IFCC-Abbott

REGIONAL RELATIONS

SChQC has collaborating with several associations of medical laboratory.

COLABIOCLI (Confederación Latinoamericana de Bioquímica Clínica)

APTM (Asociación Panamericana de Tecnología Médica)

WG Pre Analytic Phase -LATAM COLABIOCLI

Eduardo Aranda (member) and Maria E. Arredondo (member)

WG Accreditation Management COLABIOCLI

Leonardo Aguirre (member) and Leticia Luna (corresponding member)

WG Young Scientists Medical Laboratory COLABIOCLI Natalia Serrano (member)

WG New paradigms and trans disciplines in the clinical laboratory COLABIOCLI Enrique Guzman (member)

INTERNATIONAL RELATIONS

IFCC TF OSML Claudio Suarez (member)

IFCC EMD C-CMBC Cecilia Tapia (corresponding member)

IFCC National representative Eduardo Aranda

ADDITIONAL INFORMATION

DR Marcelo León, a biochemist specialized in Clinical Laboratory, responsible for the Emergency Laboratory and the Preanalytical Laboratory at the Clinical Laboratory of Hospital Las Higueras in Talcahuano, Chile. As a member of the Chilean Society of Clinical Chemistry. He had the opportunity to receive a scholarship granted by the International Federation of Clinical



Chemistry and Laboratory Sciences (IFCC), specifically the Professional Management Exchange Program (PMEP) The fellowship was developed at Clinical Laboratory of Hospital Arnau de Vilanova in Lleida, Spain.



CHINA CHINESE SOCIETY OF LABORATORY MEDICINE (CSLM)

NATIONAL MEETINGS

<i>Name of the meeting</i>	<i>Date</i>	<i>Topic</i>
17 th National Congress of Laboratory Medicine	March 30 to April 1, 2023	More than 5100 lab professionals and scholars from all over the country participated in this conference, conducting in-depth discussions and exchanges on cutting-edge technologies, new diagnostic methods, clinical practices, and other topics in the field of laboratory medicine.

EDUCATION

In 2023, the CSLM held three training sessions for talent cultivation in the western region of Yan'an City, Shaanxi Province (April 25), Nanyang City, Henan Province (December 19), and Guangyuan City, Sichuan Province (December 26) respectively. The experts shared their research achievements and experiences on the new developments, trends, and demands of laboratory medicine in their respective research fields. Through academic exchanges and technical training guidance, it further improved the educational level of laboratory medicine in the Western region, better served the grassroots health care, and positively promoted the development of laboratory medicine in local area.

INTERNATIONAL RELATIONS

On August 26, 2023, the 2023 International Laboratory Medicine Symposium was successfully held in Shenzhen. The president of CSLM, Prof. Chuanxin Wang, met with Prof. Tomris Ozben and Prof. Mario Plebani during the meeting. They have conducted in-depth exchanges and discussions on strengthening international exchange between IFCC and CSLM.

ADDITIONAL INFORMATION

June 18, the 11th Youth Committee of the CSLM was successfully established in Jinan, Shandong province. Professor Wang Chuanxin and Professor Cui Wei attended the event. Fifty-seven members of the 11th Youth Committee of the CSLM have been elected. Professor Chuanxin Wang, Chairman of the CSLM, also serves as the president of the Youth committee. Prof. Lutao Du from Qilu Hospital of Shandong University, Prof. Kai Chang from the First Affiliated Hospital of the Army Medical University, Prof. Jiayi Wang from Shanghai Chest Hospital, and Prof. Rui Zhang from Beijing Hospital, Prof. Zhou Zhou from Fuwai Hospital of the Chinese Academy of Medical Sciences has been selected as the vice president of the Youth committee.



CROATIA CROATIAN SOCIETY OF MEDICAL BIOCHEMISTRY AND LABORATORY MEDICINE (HDMBLM)

NATIONAL MEETINGS

<i>Name of the meeting</i>	<i>Date</i>	<i>Topic</i>
17 th National Congress of Laboratory Medicine	21.10.2023.	Laboratory diagnosis in transplantation medicine

EDUCATION

CSMBLM organized 3 webinars in 2023. Topics covered were:

- Satiety and hunger hormones
- Verification of capillary electrophoresis for determination of HbA1c on the Minicap Flex Piercing device
- Evaluation of the 2021 CKD-EPI equation in patients with diabetes and varying degrees of albuminuria and chronic kidney disease

Lecturers were local experts in the field.

REGIONAL MEETINGS

<i>Name of the meeting</i>	<i>Date</i>	<i>Society's contribution for the meeting</i>
Branch of Dalmatia	15.12.2023	What do we expect from technology in the clinical laboratory of the future? Experiences with testing and introduction of new technology
	06.10.2023	(Pato)fiziologija ronjenja povezana s hiperoksijom
	26.04.2023	Preeclampsia today
Branch of the Istria, Primorje-Gorski Kotar and Lika region	28.11.2023	How to reduce the impact of stress on the development of the disease
	11.10.2023	How to test the stability of the analyte?
	20.04.2023	Challenges of privatization of MBL in primary health care
Northwestern Branch	29.11.2023	Predictive equations for estimating glomerular filtration rate
	11.10.2023	UpToDate Clinical Guidelines Database
	03.05.2023	Insulin resistance
	03.04.2023	Pre-analytical preparation for specialist tests
Branch of Slavonia and Baranja	21.12.2023	Microbiota - the power of bacteria in preserving health
	29.11.2023	Clinical application of Rotem Sigma
Zagreb Branch	18.05.2023	Application of capillary zone electrophoresis in the clinical laboratory
	23.02.2023	Laboratory diagnosis of autoimmune diseases
European LabDay	5.11.2023.	Dubrovnik, Split, Osijek, Zagreb, Bjelovar, Karlovac, Požega



INTERNATIONAL RELATIONS

CSMBLM members are active in CSMBLM voluntary activities in EFLM and IFCC also. More than 15 members are full/corresponding members or chairs of different EFLM and IFCC Committees and Working/Task Groups. Members are active in live and virtual meetings, and they are participating in educational and scientific activities. The calls for new members are regularly distributed to all CSMBLM members by mass mailing and posted on the official web page and on the official Facebook page. Moreover, CSMBLM is distributing in emails all organized activities under EFLM and IFCC auspices (congresses, webinars...).

ADDITIONAL INFORMATION

CSMBLM supported an IFCC initiative Global MedLab Week 2023 and shared propagation material on a web page, informed members about the initiative, and posted all propagation material on the official CSMBLM Facebook page. In 2023 CSMBLM marked European Laboratory Day on November 5th with different activities organized by members in Dubrovnik, Split, Osijek, Zagreb, Bjelovar, Karlovac, Požega. A few Croatian laboratories applied as an offerer in IFCC Professional Exchange Programme. All CSMBLM members are members of the EFLM Academy by block registration

CSMBLM is supporting members with bursaries for educational events and providing letters of recommendation for applying to specific member positions.



ESTONIA ESTONIAN SOCIETY FOR LABORATORY MEDICINE

NATIONAL MEETINGS

<i>Name of the meeting</i>	<i>Date</i>	<i>Topic</i>
General meeting of ESLM	April, 5 th Viimsi Artium, Harju county	Main topics: Infectious diseases as causes of death, epidemics and molecular diagnostics, Legionella incidence in Estonia. Green laboratories.
XXIII Summer School of ESLM	2022 September	August, 23.-24 Lapanina, Pärnu county
General meeting of ESLM	December, 7 th Jaanihanso, North-Pärnu county	Main topics: happiness and unhappiness, introduction of Validation Manager, current trends in HPV screening, control of cross-border infections in EU

REGIONAL RELATIONS

Cooperation between the Estonian and Lithuanian societies for Laboratory medicine in implementing the LOINC codes for laboratory tests in use in local laboratories

Cooperation between Tissue Typing laboratories

INTERNATIONAL RELATIONS

ESLM is the member of the following international organizations: IFCC, EFLM, BALM, ESCMID, EUCAST

Paul Naaber is the national representative in ESCMID

Marina Ivanova is the national representative in EUCAST

Helle Järv is a member of EUCAST subcommittee AFST

Kadri Klaos is the member of EUCAST subcommittee AMST

Marika Jürna-Ellam is the member of EUCAST subcommittee ECMM



Agnes Ivanov is a member in the IFCC Working Group “Laboratory Errors and Patient Safety” (WG-LEPS) and corresponding member in IFCC TF-POCT

Marge Kütt is a corresponding member in the EFLM Task Group “Preparation of Labs for Emergencies” (TF-PLE)

Piret Kedars is a corresponding member in the EFLM Task Force “Direct-to-Consumer Testing” (TF-DTCT)

Galina Zemtsovskaja is a corresponding member in IFCC working groups: Committee on Clinical Applications of Cardiac Biomarkers (C-CB); Committee on Bone metabolism (C-BM); Harmonization of Interpretive Commenting EQA (WG-ICQA)

Mikk Tooming is a corresponding member of IFCC working group Committee on Molecular Diagnostics (C-MD)

ADDITIONAL INFORMATION

Together with Estonian Society of Bioanalysts, ESLM published issue No 9 (2023) of the journal „Eesti Laborimeditsiin“ („Estonian Laboratory Medicine“) (in May).

There are 2 sections in ESLM:

- Section of clinical microbiology
- Section of laboratory physicians

There are working groups in the fields of

- Laboratory terminology,
- LOINC (Logical Observation Identifiers Names and Codes),
- Laboratory Quality,
- Kidney Biomarkers,
- Cardiac Markers,
- Laboratory Hematology,
- Diagnostics of Urogenital Infections
- Protein electrophoresis
- Flow cytometry
- Method Harmonization
- Implementation of IVDR in Estonian laboratories
- Autoimmune diseases

22 laboratories are reporting all the laboratory test results electronically to the National Digital Health Record.

New forms of visual display of dynamical changes of test results are available since 2021 in National Digital Health Record.



FINLAND

FINNISH SOCIETY OF CLINICAL CHEMISTRY (SKKY)

NATIONAL MEETINGS

<i>Name of the meeting</i>	<i>Date</i>	<i>Topic</i>
Kevätkoulutuspäivät/ Spring meeting	June 9, 2023	Interactive lectures under topic “Preanalytics” (together with 2 other national organisations in laboratory medicine)
Laboratoriolääketiede ja –näyttely Laboratory Medicine and Exhibition	October 5-6, 2023	General laboratory medicine/session Coronary artery disease diagnostics

INTERNATIONAL RELATIONS

Meetings and collaboration with other Nordic Clinical Chemistry societies (NFKK/Nordisk Forening for Klinisk Kemi)

Participation in several EFLM and IFCC working groups and committees

ADDITIONAL INFORMATION

National Clinical Chemistry journal (4 numbers/year)

Participation in organising Nordic Clinical Chemistry congress (upcoming in September 2024)

Six national society board meetings in 2023 (face-to-face and online)

Finnish Society of Clinical Chemistry has awarded travel grants and scientific grants for its members based on evaluated applications



FRANCE

SOCIÉTÉ FRANÇAISE DE BIOLOGIE CLINIQUE (SFBC)

ADDITIONAL INFORMATION

SFBC Board

Executive Board:

- President Pr Katell PEOC'H
- Vice-President Pr Alain CARRIE
- Past-President Pr Vincent SAPIN
- General Secretary Dr Marie Christine BEAUVIEUX / Dr Caroline MOREAU
- Treasurer Dr Laurence MOULY

Scientific Committee:

Dr Edith BIGOT-CORBEL
Dr Camille CHENEVRIER GOBEAUX
Dr Delphine COLLIN-CHAVAGNAC
Dr Constance DELABY

NATIONAL MEETINGS

<i>Name of the meeting</i>	<i>Date</i>	<i>Topic</i>
National meetings with SFBC auspices (+ SFBC members in the scientific committee)	Biomed J 2023	Laboratory Medicine
	JNBH 2023	Laboratory Medicine
	Thyroid at XXIst Century (December 7 th -8 th , 2023, Paris)	Thyroid Biology

EDUCATION

- Educational Committee chaired by Pr V. Sapin then Pr K Peoc'h
 - Continuous professional development (DPC) and continuous medical education (CME) through SFBC scientific meeting sessions. V. Sapin was President of the National organism of Professional Development called "Biologie Clinique" and was replaced by K Peoc'h in the last General Assembly.

- Committee on Evaluation of Professional Practices (C-EPP) :
chaired by Dr I. Aimone-Gastin (Nancy)
 - National Agreement SFBC as Validating Society for "EPP"
 - Relations with the Federation of Medical Specialities (FSM)

REGIONAL MEETINGS and WEBINARS

Participation of SFBC members in International meetings

- WorldLab – EuroMedLab Roma 21 - 25 May 2023
 - Ph GILLERY: COC and SPC member
 - D. COLLIN-CHAVAGNAC: ISAB
 - B. GOUGET: Pre-Satellite Symp Poct, home, hospital, and Beyond
 - M. LENSKI: IFCC Forum for Young Scientists, Digital technologies
 - Ph GILLERY: IFCC Symp., Precision Medicine, IFCC-SD standardization
 - A. GUILLON: S2, Covid 19 viral or immunological disease?
 - B. GOUGET, V. DELATOURE: S3, Diagnostic Challenges in Sepsis
 - M. LENSKI, A. TIKNONOV: S7, Young Scientist session
 - C. CONFAVREUX: S8, Bone as endocrine organ
 - P. MARQUET, JP CRISTOL; S11, Role of Clin Chem in Kidney transplantation

Participation of SFBC members in other meetings

- G GRZYCH. Biomarkers of nitrous oxide poisoning: Journée Nationale de Biologie Clinique (STBC), May 4th-6th, 2023
- G GRZYCH. Biomarkers of nitrous oxide poisoning: CORATA (with Belgian Society), June 29th-30th, 2023
- V SAPIN, Biomarkers of mild brain injury: Snibe day, Shenzhen (CN), August 25th, 2023
- G GRZYCH Homocysteine in Medicine – Past, Present and Futures Challenges: Immuno Assay International Symposim – Warsaw (PL) April 2023
- Organization of IFCC webinars
 - Nitrous oxide abuse: clinical consequences and biological markers related. March 22, 2023
 - Biomarqueurs sanguins diagnostiques du traumatisme crânien léger. May 30, 2023
 - IFCC YS webinar: Challenges of digital technologies and artificial intelligence i n laboratory medicine. July 27, 2023

REGIONAL RELATIONS

EFLM: Participation of SFBC members			
Functional unit	Name	Surname	Position
TF: European regulatory affairs	Bernard	POGGI	Corresponding Member
TFG: Urinalysis (TFG-U)	Audrey	MERENS	Member
	Marine	PESTEL-CARON	Corresponding member
TG: Chronic Kidney/Disease	Laurence	CHARDON	Member
TG: European Laboratory Day (TG-ELD)	Bernard	GOUGET	Member

WG: Accreditation and ISO/CEN standards (WG-A/ISO)	Guilaine	BOURSIER	Chair
WG: Congresses and Post-Graduate	Guillaume	GRZYCH	Member - Young Scientist
Education			
WG: Guidelines (WG-G)	Bérénice	SCHELL	Member - Young Scientist
TFG: Biomarkers of Diagnosis and follow-up of nitrous oxide abuse	Guillaume	GRZYCH	Chair
WG: Biomarkers of Mild Traumatic Brain Injury	Vincent	SAPIN	Chair
WG: Preanalytical Phase	Jean-Pierre	BOUILLLOUX	Corresponding member

INTERNATIONAL RELATIONS

- SFBC Committee on International Relations:
 - Dr Guilaine BOURSIER Chair WG A-ISO
 - Prof. Philippe GILLERY IFCC Representative
 - Dr Bernard GOUGET Chair IFCC – C-MHBLM, TF-H
 - Prof. Damien GRUSON Liaison RBSLM – EuroMedLab Brussels 2025
 - Dr Guillaume GRZYCH Chair TFG-BNOA
 - Dr Charles LEFEVRE Corresponding member IFCC - TF-YS
 - Dr Marie LENSKI EFLM Representative and Core Member IFCC - TF-YS
 - Prof. Vincent SAPIN President FIFBCML
- Participation in the International Advisory Boards of IFCC/EFLM meetings:
 - WorldLab - EuroMedLab Roma 2023 (Pr P. Gillery, Member of the Scientific Programme Committee)
 - EuroMedLab Brussels May 18-22, 2025 (Pr D Gruson, Congress President),
- SFBC: founding member of the FIFBCML : Fédération Internationale Francophone de Biologie Clinique et de Médecine de Laboratoire.
- Participation of SFBC members at National meetings of IFCC full member societies
- Participation of SFBC members in IFCC Committees and Working Groups
- Scientific Division (SD)
 - Executive Committee V. Delatour, Member, 2023-2025
- Committees
 - Standardization of Thyroid Function Tests (C-STFT) V. Raverot, Member 2023-2025
 - Molecular Diagnostic (C-MD) K. Peoc'h, corresp. Member
 - Traceability in Laboratory Medicine (C-TLM) A. Vassault, corresp. Member
 - Bone markers (C-BM) V. Delatour, Consultant
J.P. Cristol, corresp. Member
- Working groups
 - Standardization of Procalcitonin assays (WG-PCT) V. Delatour, Chair, 2021-2023
A. Boeuf, Member
H. Briand, Member
A.M. Dupuy, Member
P. Hausfater, Member






- Standardization of Carbohydrate-Deficient Transferrin (WG-CDT) F. Schellenberg, Member
- Biomarkers of Neurodegenerative Diseases (WG-BND) S. Lehmann, Member
V. Delatour, Member
- Commutability in Metrological Traceability (WG-CMT) V. Delatour, Member
- Apolipoproteins by Mass Spectrometry (WG-Apo MS) V. Delatour, Member
C. Grande, Member
E. Angles-Cano, Consultant
L. Pieroni, corresp. Member
- Standardisation of Albumin Assay in Urine (WG-SAU) L. Pieroni, corresp. Member
- Standardisation of Pregnancy-Associated Plasma Protein (WG-PAPPA) R. Garnotel, corresp. Member
- Standardization of Troponin I (WG-TNI) G. Lefèvre, corresp. Member
- Standardisation of Hemoglobin A2 (WG-HbA2) M. Arock, corresp. Member
- Education and Management Division (EMD)
 - Committees
 - Committee on Education in the Use of Biomarkers of Diabetes (C-EUBD) P. Gillery, corresp. Member
 - Committee on Kidney Disease (C-KD) J.P. Cristol, corresp. Member
 - Working group
 - Flow Cytometry (WG-FC) C. Lambert, Chair, 2022-2024
- Emerging Technology Division (ETD)
 - Committee on Mobile Health and Bioengineering in Laboratory Medicine (C-MHBLM) B. Gouget, Chair, 2021-2023
 - Working group on Neonatal Bilirubin (in cooperation with SD) (WG-NB) A. Mailloux, Member
V. Delatour, Member
 - Working group on Metabolomics (WG-M) M. Lenski, Member
- Task Forces (TF)
 - Task Force on History (TF-H) B. Gouget, Co-Chair, 2022-2024
 - Task Force on Global Newborn Screening (TF-NBS) E. Lebredonchel, Member (Y.S) 2021-2023
 - Task Force on Global Lab Quality (TF-GLQ) J.M. Giannoli, Member, 2021-2023
A. Perret-Liaudet, Member, 2021-2023
A. Vassault, Member, 2021-2023
 - Task Force for Young Scientists (TF-YS) M. Lenski, Member, 2023-2025
 - Task Force on Ethics (TF-E) C. Lefevre, corresp. Member
E Bugni, corresp. Member



GEORGIA LABORATORY MEDICINE ASSOCIATION OF GEORGIA (GLMA)

NATIONAL MEETINGS

Name of the meeting	Date	Topic
3 rd Congress of the Georgian Laboratory Medicine Association	8, July 2023	* 4-year activity report of GLMA president * Election of new GLMA president
GLMA 5 th International Conference   	23, September 2023	"Laboratory medicine role in clinical outcome and challenges in Georgia" Reference Intervals and Clinical Decision Limits, Biological Variations

EDUCATION

1. 04 april 2023 – EFLM webinar in Genetics&Reproductive disorders “Applied genetic methods in reproductive disorder” organized by GLMA member and young scientist-member of EFLM distance education and e-learning working group Sofo Jashiashvili.
Speaker: Mariam Chipashvili (TSU)
Moderator: Tamar Ramishvili (counselor)
2. 12 December 2023 – online webinar “The role of LIS in modern laboratory management process”

- 20 December 2023 - online webinar “Clinical significance of genetic studies”
- 2023-2024 - A training program for "Medical Laboratory Technician" with the support of USAID Industry-led Skills Development Program and the European Business Association



Applied genetic methods in reproductive disorder

Date: Webinar 2023

Speaker: Mariam Chipashvili (Georgia) - Dept of Pharmacology, Faculty of Medicine, I. Javakishvili Tbilisi State University, Tbilisi, Georgia - [\(Know more\)](#)

Learning objectives:

- The importance of the extranalytical phases on the overall laboratory quality
- How refocusing on these phases could make our profession more medical
- Basics about artificial intelligence, demand management and integrated diagnostics



REGIONAL MEETINGS

<i>Name of the meeting</i>	<i>Date</i>	<i>Topic</i>
Lab Week 2023	3-29 april 2023	
Human diagnostic Georgia 25	8 September 2023	

REGIONAL RELATIONS

- Lab Week 2023
- 25 Remarkable Years of Human Diagnostics Georgia – September 2023, Tbilisi, Georgia



INTERNATIONAL RELATIONS

- 2023 EQA pilot program acc. to IFCC’s global initiative to enhance clinical laboratories’ quality in developing countries – 10 participant laboratories from Georgia. 25th International Congress of Clinical Chemistry and Laboratory Medicine (WorldLab) and the 25th European Congress of Clinical Chemistry and Laboratory Medicine (EuroMedLab) – Rome, May 2023
- The EFLM Newsletter n. 3/2023 - COFFEE WITH THE EFLM PRESIDENT



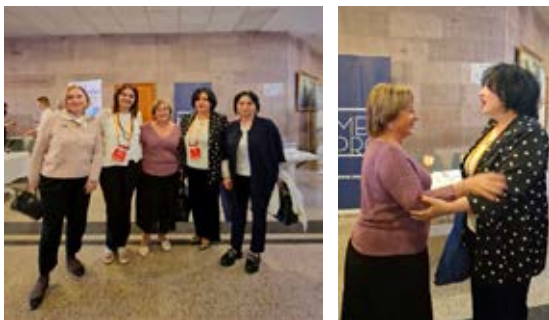
- International Symposium on Laboratory Medicine– by SNIBE and IFCC, Shenzhen, P.R. China, 29 October 2023



- KDL WEEKEND International Conference of Armenian association of Laboratory Medicine, 4-5 November 2023



- KDL WEEKEND International Conference of Armenian association of Laboratory Medicine, 4-5 November 2023



ADDITIONAL INFORMATION

GLMA is the full member of the following international organizations: IFCC, EFLM

Full membership:

- Nino Tabatadze – IFCC Task Force on Global eLearning/eAcademy (TF-GEL)
- Sofo Jashiashvili – EFLM Working Group on Distance Education and e-Learning (WG-DE)
- Leila Akhvediani - EFLM Working Group “Harmonisation” (WG-H)

Corporate membership:

- Nino Bakuradze – EFLM working group on Postanalytical Phase (WG-POST)
- Ekaterine Kupertadze – EFLM WG on Patients Focused Laboratory Medicine (WG-PFLM)
- Tamar Ramishvili – IFCC Task Force for Young Scientists (TF-YS)



- Maka Dakhundaridze – IFCC Committee on Evidence-Based Laboratory Medicine (C-EBLM)
- Maia Alkhazishvili – IFCC Committee on Clinical Laboratory Management (C-CLM)
- Manana Akhvlediani – IFCC Task Force on Ethics
- Ekaterine Kupatadze – IFCC Task Force on Global Reference Interval Database (TF-GRID)
- Nino Abesadze – IFCC Task Force on Global Newborn Screening (TF-NBS)
- Nino Bakuradze – IFCC Taskforce on Global Lab Quality (TF-GLQ)
- Nino Bekaia – IFCC Committee on Standardization of Thyroid Function Tests (C-STFT)
- Ekaterine Khmaladze – IFCC Committee on Clinical Molecular Biology Curriculum (C-CMBC)
- Nana Dzeladze – EFLM working group on Accreditation and ISO/CE standards” (WG-AISO)
- Nino Abesadze – IFCC Task Force on Laboratory Medicine Practice Guidelines (TF-LMPG)



HONG KONG - CHINA REGION

HONG KONG SOCIETY OF CLINICAL CHEMISTRY (HKSCC)

NATIONAL MEETINGS

<i>Name of the meeting</i>	<i>Date</i>	<i>Topic</i>
HKSCC Annual Scientific Meeting and Annual General Meeting	7 th January 2023	<ol style="list-style-type: none"> 1. Development of Robotic Surgical System for Clinical Application - from Laparoscopic to Endoscopic Surgery 2. Therapeutic Drug Monitoring of 5-fluorouracil to improve Patient Safety and Drug Efficacy
HKSCC Dinner Lecutre	18 th May 2023	<ol style="list-style-type: none"> 1. New Insights of Biomarkers in Clinical Application 2. Bringing the Power of Rapid NGS to Rare Diseases and Oncology
HKSCC Dinner Lecutre	25 th August 2023	Creating Paradigm Shifts in Molecular Diagnostics
HKSCC Dinner Lecutre	16 th November 2023	<ol style="list-style-type: none"> 1. Assessment of Analytical Characteristics of New High Throughput Immunoassay Analyzer 2. The Clinical Application of phi in Prostate Cancer Diagnosis

EDUCATION

Year 2023 is the 40th Anniversary of HKSCC. It was started with the Annual Scientific Meeting (ASM) held on 7 January 2023. This was the first physical ASM of the society since the COVID-19 pandemic. The theme of the ASM was “Current Advances in Clinical Investigation and Management”. There were two presentations by invited speakers: (1) " Development of Robotic Surgical System for Clinical Application - from Laparoscopic to Endoscopic Surgery" by Professor Philip WY CHIU, Head of Division of Upper GI & Metabolic Surgery, Department of Surgery; Associate Dean (External Affairs), Faculty of Medicine, The Chinese University of Hong Kong; and (2) " Therapeutic Drug Monitoring of 5-fluorouracil to improve Patient Safety and Drug Efficacy" by Dr Felix CK WONG, Consultant, Division of Chemical Pathology, Department of Pathology, Queen Mary Hospital. These were followed by five industrial presentations by Beckman Coulter Hong Kong Limited, Bio-Rad Pacific Limited, Ortho Clinical Diagnostics, Roche Diagnostics (Hong Kong) Limited and Waters Corporation. The ASM was well attended by 139 HKSCC members and guests. There were also fifteen industrial partners participating in the industrial exhibition.

HKSCC 40th Anniversary 2023



Group photo of HKSCC Council Members (Term 2022 – 2023) with Industrial Partners in HKSCC 40th Anniversary Celebration



ASM 2023 (7 Jan 2023): Prof Philip WY CHIU



ASM 2023 (7 Jan 2023): Dr Felix CK WONG

A dinner lecture was held on 18th May 2023 jointly by Hong Kong Society of Clinical Chemistry and Thermo Fisher Scientific (Hong Kong) Limited. There were two presentations by invited speakers: 'New Insights of Biomarkers in Clinical Application' by Ms KH CHONG, Product Manager (Biomarkers) APAC, Thermo Fisher Scientific, and 'Bringing the Power of Rapid NGS to Rare Diseases and Oncology' by Dr Amy LAM, Field Application Scientist, Genetic Science Group, Thermo Fisher Scientific, Hong Kong. The lecture was attended by 120 members and guests.



Dinner Lecture (18 May 2023): Ms KH CHONG



Dinner Lecture (18 May 2023): Dr Amy LAM

Highlight of the year was the dinner lecture held on 25th August 2023. Professor Dennis YM LO, Li Ka Shing Professor of Medicine, The Chinese University of Hong Kong was invited to present a topic on ‘Creating Paradigm Shifts in Molecular Diagnostics’. The lecture was well attended by 158 members and guests.



Prof. Dennis LO with audiences

A dinner lecture was held on 16th November 2023 by Hong Kong Society of Clinical Chemistry and Beckman Coulter Hong Kong Limited. There were two presentations by invited speakers: ‘Assessment of Analytical Characteristics of New High Throughput Immunoassay Analyzer’ by Mr. Bobby TAGORE, Laboratory Manager, Pathlab Bay of Plenty, Tauranga Hospital, New Zealand, and ‘The Clinical Application of phi in Prostate Cancer Diagnosis’ by Prof. Peter CHIU, Associate Professor, Urology, CUHK. The lecture was attended by 120 members and guests.



Dinner Lecture (16 November 2023): Mr Bobby TAGORE



Dinner Lecture (16 November 2023): Prof. Peter CHIU





Audience participating in Q & A sessions



HUNGARY

HUNGARIAN SOCIETY OF LABORATORY MEDICINE (MLDT)

NATIONAL MEETINGS

<i>Name of the meeting</i>	<i>Date</i>	<i>Topic</i>
61. Congress of the Hungarian Society of Laboratory Medicine	8 th -10 th June, 2023	Major topics: pre-and postanalytical issues in laboratory diagnostics, laboratory issues in the "post-COVID era", hemostasis disorders, TDM, laboratory immunology, endocrinology
XXV. MIT-MLDT Postgraduate Course on immunology	10 th October, 2023	Complement diagnostics and immunoblotting techniques
QualiCont Forum 2023	22 nd September, 2023	Internal and external quality control, POCT testing, diabetes mellitus, urinalysis

EDUCATION

The above three meetings all had educational and continuous professional development purposes as well.

REGIONAL RELATIONS

In the surrounding region, Hungarian specialists in laboratory medicine conventionally have good relations with laboratory experts in Croatia, Austria, Slovenia, Serbia and Romania. There are collaborations in different scientific fields, eg. hemostasis, immunology, educational issues. Some colleagues working in Hungarian labs originated from Romania.

INTERNATIONAL RELATIONS

Members of our society regularly participate in international congresses like the EuroMedLab-Worldlab 2023 Rome.

Members of our Society are involved in several international projects and have international roles in IFCC and EFLM:

IFCC Communications and Publications Division, Vice Chair: Prof. János Kappelmayer

IFCC, eJIFCC, Editor: Prof. János Kappelmayer

IFCC Communications and Publications Division, Working Group-eJIFCC, Chair: Prof. János Kappelmayer, Members: Dr. Harjit Pal Bhattoa, Prof. Tamás Kőszegi, Prof. Gábor L. Kovács

IFCC Scientific Division, Committee on Bone Metabolism, Member: Dr. Harjit Pal Bhattoa

EFLM Science Committee, Working Group: Postanalytical Phase, Expert/Consultant: Dr. Éva Ajzner

EFLM Education and Training Committee, Working Group: Congresses and Postgraduate Education, Member: Dr. Zsuzsa Bagoly

EFLM Communication Committee, Working Group: Promotion and Publications, Chair: Dr. Harjit Pal Bhattoa

EFLM EuroLabNews, Editor: Dr. Harjit Pal Bhattoa

EFLM Profession Committee, Task Group: EFLM Syllabus Course, Member: Dr. Harjit Pal Bhattoa

ADDITIONAL INFORMATION

There were also some other postgraduate educational courses in our field (laboratory medicine and subdisciplines) organized by medical universities independently of our national society.



INDIA
ASSOCIATION OF CLINICAL BIOCHEMISTS OF INDIA
(ACBI)

NATIONAL MEETINGS

<i>Name of the meeting</i>	<i>Date</i>	<i>Topic</i>
48 th . Annual National Conference of Association of Clinical Biochemists of India.	13 – 16 th . September 2023	Theme: “Laboratory Medicine Path Ahead- Amalgamating Technology And Humanity”

EDUCATION

ACBI National Conference – Trivandrum, Kerala

Workshops:

1. "Proteomics and Medical Applications"
2. "Genomics in Infectious Diseases,"
3. "Inborn Metabolic Disorders and Amino Acid Analysis,"
4. "From Conceiving a Research Topic to its Publication."
5. "Transition from ISO15189 2012 to 2022 - Learning Opportunities"

Awadhesh Saran Memorial Oration: Prof. Shyam S. Chauhan, Department of Biochemistry, All India Institute of Medical Sciences. 'Clinical significance of Heterogenous Nuclear Ribonucleoprotein D (HnRNP D) in Oral Cancer.'

DR. K. P. SINHA ORATION: Prof. Tony Badrick, Chief Executive Officer, Royal College of Pathology Australasia – QAP, Australia & President, APFCB. "Counting on patients, 1 and All"

DR T. N. PATTABIRAMAN ORATION AWARD: Dr. Seema Bhargava, Chairperson & Senior Consultant, Department of Biochemistry & Professor, GRIPMER, Sir Ganga Ram Hospital, New Delhi. "The Nobel Laureates of Biochemistry and the 'Not So Nobel'."

K. L. GUPTA MEMORIAL ORATIO: Dr. Alpana Sharma, Professor, Department of Biochemistry, All India Institute of Medical Sciences, New Delhi. "Novel Mechanistic Approaches and recommendations in Cancer: From Diagnostics to Therapeutics"

MRS. & DR G. P. TALWAR ORATION AWARD: Dr. Medha Rajappa., Associate Dean (Research) and Professor of Biochemistry, Jawaharlal Institute Postgraduate Medical Education & Research, Puducherry. "Biomarker Signatures of Inflammatory Skin Diseases and their Clinical Implications."

DR PRAVEEN SHARMA ORATION: Dr. Poornima Manjrekar, Professor of Biochemistry, KMC, Mangalore. "Changing Face of Type 2 Diabetes: Trends and Trojans"

TARANATH MEMORIAL POPULAR LECTURE ORATION AWARD: Professor Chandrabhas Narayana, FASc, FRSC, FNASc., Director, Rajiv Gandhi Centre for Biotechnology, Thiruvananthapuram, Kerala. "Two decades of Raman spectroscopy as diagnostics, drug discovery, protein structure function studies"

SYMPOSIA'S: A total of 19 symposia's were held over a period of 3 days. Some of the speakers were;

1. IFCC Committee on Clinical Laboratory Management (C-CLM) Symposia:
Prof. Sedef Yenice (VLP), role of data analytics in clinical labs
2. Prof. Praveen Sharma, Secretary, APFCB - Emotional Intelligence in leadership
3. Prof Dr. Tomris Ozben, President-Elect, IFCC (Virtually) -advancements in oncology diagnostic
4. Dr Khosrow Adeli, President, IFCC (virtually) - "emphasizing the cardiovascular risks associated with postprandial dyslipidemia in obesity and diabetes"
5. Dr. Pradeep K Dabla, Chair, Communication and Publication Committee APFCB; integration of cutting-edge AI into medical diagnostics
6. Dr. Bernard Gouget,(Chair IFCC C MHB LM ; "Unlocking the Potential of Chat GPT: Can it be our Virtual Assistant in Lab Medicine for Better Care?"
7. Dr Arnab Pal, PGIMER, Chandigarh: Advances in Cancer Diagnostics: Current Indian Scenario"
8. Dr. Maritha Kotze (Division of Chemical Pathology, NHLS and Stellenbosch University, Tygerberg Hospital, Bellville, Cape Town, S Africa) ; Progression of genetic testing in pathology.
9. Dr. Helen Martin, (Past Secretary, APFCB and APFCB Traveling Lecturer on Vitamin D's pivotal role in health.
10. AACC India Section; Dr. Octavia M. Peck Palmer's (Division Director, Clinical Chemistry Medical Director, UPMC Presbyterian and Shadyside Automated Testing Laboratories), "The Total Testing Process: Collaboration between Laboratory Medicine and Emergency Medicine to Ensure Quality Testing,"

11. IFCC/EBLM Evidence-based Laboratory Medicine Symposia: "The Value and Evidence of Laboratory Tests Used in the Management of Diabetes Mellitus,"
12. Dr. Tony Badrick, (CEO, Royal College of Pathologists of Australasia Quality Assurance Programs. "The Clinical Laboratory in Health & Disease."

Free Paper Sessions by 85 delegates

Oral Award categories: Twenty two young investigators presented their work and vied for the awards.

154 poster presentations

AFMC Quiz contest: Was organized by the dept of Biochemistry, Armed Forces Medical College, Pune and a great success.

Industrial Workshop and Scientific activities: Abbott Healthcare Pvt Ltd , ROCHE Diagnostics, Beckman Ltd., DiaSys Ltd, Q-Line Biotech, OCD Ltd.,



Many Zonal and State level conferences were held during 2023:

1. ACBI TAMIL NADU STATE BRANCH; Third Workshop on: 'Understanding the Principles and Practices of Quality Control' by CMC EQAS under the Aegis of ACBI, Department of Clinical Biochemistry, CMC, Vellore & ACBI Tamil Nadu Chapter. 1st October 2022



2. CBI KERALA STATE BRANCH: "Modern Landscapes in Clinical Laboratories" was conducted on 9th & 10th February, 2023 at Believers Church Medical College Hospital, Thiruvalla, Kerala, India

3. ACBI EAST ZONE CONFERENCE: Clinical Biochemists of the State of Sikkim hosted a two-day East Zone Conference of Association of Clinical Biochemists of India for the very first time in Sikkim on 16th and 17th of September, 2022 on "Chronic Non-Communicable Diseases and its Ever-Evolving Enigma (CNCD-E 3)



4. ACBI BIHAR BRANCH Mol Bio WS: Molecular Biology workshop 1st Dec to 03rd Dec 2022 Department of Biochemistry, AIIMS Patna & ACBI, Bihar Branch.

5. 3rd workshop on Basic Molecular Techniques was held in AIIMS Jodhpur from 14th to 18th March 2023.



Prof Seema Bhargava
ACBI President



Prof Manaswini Mangaraj
Organising chairperson

6. ACBI West Bengal Chapter Meeting, Goumara, Jalpaiguri Dist, Jalpaiguri, June 16-17, 2023.

“Translational Research and Diagnostics”

7. ACBICON ODISHA 2023: The Department of Biochemistry AIIMS Bhubaneswar, conducted a one-day Odisha chapter conference of the Association of Clinical Biochemists of Odisha (ACBI) on “Immuno-metabolomics- A glance at the immune response of diseases”, on the 25th March 2023



REGIONAL RELATIONS

Many members of ACBI are also actively participating in the affairs of APFCB. Dr Praveen Sharma, Dr. Rajiv R Sinha, Dr. Pradeep Dabla, Dr Purvi Purohit, Dr Prasenjit Mitra, Dr Mithu Banerjee & Dr Barnali Das as chairpersons/members of various divisions & sub-committees.

INTERNATIONAL RELATIONS

Many members of ACBI are actively participating in the affairs of IFCC. Dr Praveen Sharma, Dr. Pradeep Dabla, Dr Prasenjit Mitra, Dr Seema Bhargava, Dr Barnali Das & Dr Sudip Datta are chairpersons/members of various divisions & sub-committees of IFCC.

Large number of members participated as delegate at the 25th International Congress of Clinical Chemistry and Laboratory Medicine (WORLDLAB 2023) in Rome from May 22 to 24, 2023.

ADDITIONAL INFORMATION

The 50th Annual National Conference of the association will be held in Chandigarh from 3rd to 5th December 2024. The organizing secretary is Prof. Indu Verma.

The following were elected as office bearers of ACBI for the year 2024:



**PRESIDENT:**

Dr. **Kannan Vaidyanathan**, MD, FRCP (Edin.)
Professor & Head,
Department of Biochemistry,
Believers Church Medical College Hospital,
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VICE PRESIDENT (I) & ORGANIZING SECRETARY, ACBICON 2023

Dr. **Indu Verma**

Professor & Head
Department of Biochemistry
Postgraduate Institute of Medical Education & Research (PGIMER),
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VICE PRESIDENT (II)

Dr. **Shailja Chambial Sharma**

Additional Professor
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All India Institute Of Medical Sciences
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SECRETARY:

Dr. **Rajiv Ranjan Sinha**,
Professor & Head,
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TREASURER:**Dr Krishna Ranjan Prasad,**

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JOINT SECRETARY:1. **Dr Mamta Kankra**

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& Quality Manager, Clinical Laboratory Services,

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2. **Dr. Riju Mathews**

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ZONAL COUNCIL MEMBERS**North Zone:****Dr. Dharamveer Yadav**

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South Zone:**Dr Medha Rajappa,**

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Consultant, Laboratory Medicine,



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Central Zone:

Dr. Sukhes Mukherjee

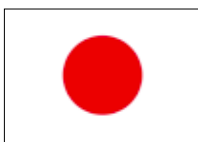
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JAPAN
JAPAN SOCIETY OF CLINICAL CHEMISTRY (JSCC)

NATIONAL MEETINGS

<i>Name of the meeting</i>	<i>Date</i>	<i>Topic</i>
The 63rd Annual Meeting of the Japan Society of Clinical Chemistry	27-29th October 2023	<p>2 Special Lectures:</p> <ol style="list-style-type: none">1) Development and social implementation of clinical chemistry, supporting the quality of medical care2) Deciphering the mysteries of sleep: toward the molecular substrate for sleepiness <p>3 Educational Lectures:</p> <ol style="list-style-type: none">1) Challenges for Clinical Implementation of Renal Regenerative Medicine2) Use of liquid chromatography tandem mass spectrometry (LC-MS/MS) for assessment of vitamin D status3) The Present & Prospective of Precision Oncology in Solid Tumors - Unraveling from SCRUM-Japan <p>1 International seminar:</p> <ol style="list-style-type: none">1) The Use of the Adaptive Learning Concept in Laboratory Medicine <p>9 Symposia:</p> <ol style="list-style-type: none">1) Clinical lab tests for abnormalities of glucose and lipid metabolism in patients with diabetes2) Latest Research on Lipoprotein (a)3) Pitfalls in Clinical lab tests - Case Report and Discussion 20234) Discovery Targets of Novel Lipid-Lowering Drugs5) Thinking about Re-testing of Clinical Chemistry Tests6) TDM Symposium (Kick-off Symposium)7) Current Status and Issues of HDL Function Testing8) Biomarker Research in Liver Disease9) Old and New Animal Clinical Chemistry: What should not be forgotten and Toward the Future



EDUCATION

In all annual meeting of JSCC and regional meetings in Japan, educational lectures on various clinical chemistry related subjects, such as standardization, analytical methods, and laboratory related trouble shootings were performed by the specialists of clinical chemistry. In addition, clinical chemistry related companies held various types of symposiums and educational meetings in all over Japan all the year round.

Lecture for Certified Clinical Chemistry and Immunochemistry Quality Assurance Medical Technologists and Professions was offered on an on-demand basis.

REGIONAL MEETINGS

<i>Name of the meeting</i>	<i>Date</i>	<i>Society's contribution for the meeting</i>
Hokkaido branch: The 33 rd branch general & regular meeting	Sep 2, 2023	Each branch supervises the meeting of each region
Tohoku branch: The 34 rd branch general & regular meeting	Sep 2, 2023	Each branch supervises the meeting of each region
Kanto branch: The 31 th branch general meeting	Jun 3, 2023	Each branch supervises the meeting of each region
Koshinetsu branch: The 41 th branch general & regular meeting	Jul 23, 2023	Each branch supervises the meeting of each region
Tokai&hokuriku branch: The 33 rd branch general & regular meeting	Jul 30, 2023	Each branch supervises the meeting of each region
Kinki branch: The 32 st branch general meeting	Mar 19, 2023	Each branch supervises the meeting of each region
Chugoku & Shikoku branch: The 33 rd branch general & regular meeting	Feb 5, 2023	Each branch supervises the meeting of each region
Kyusyu branch: The 34 rd branch general & regular meeting	Feb 18, 2023	Each branch supervises the meeting of each region

INTERNATIONAL RELATIONS

SD Committees:

- Nomenclature, Properties and Units (C-NPU) in collaboration with IUPAC: Koh Furuta, Member

SD Working Groups:

- Standardisation of Albumin Assay in Urine in collaboration with NKDEP (WG-SAU): Yoshihisa Itoh, Member
- Immunosuppressive Drugs (WG-ID): S Masuda, Member
- Pancreatic Enzymes (WG-PE): Shigeru Ueda, Member
- Fecal Immunochemical Testing (WG-FIT): S Takehara (Member), Y Doi, M Fujimura, T Fukuda, H Hayashi, A Horikawa, S Wu, Y Masuda, Corp. Member

Education Management Division (EMD) Committees:

- Education in the Use of Biomarkers in Diabetes (C-EUBD): Asako Sato, Member
- Committee on Kidney Disease - (C-KD): Takashi Wada, Member

Emerging Technologies Division (ETD) Committees:

- Committee on Mobile Health and Bioengineering in Laboratory Medicine (C-MHBLM): Kazuhiko Kotani, Member

International Journal Editor

Associate Editors for Annals of Clinical Biochemistry: Kazuhiko Kotani

Editorial Board of *Clini Chimica Acta*:

Nobuo Okumura, Editorial Board
Masato Maekawa, Editorial Board
Takashi Miida, Editorial Board
Minoru Tozuka, Editorial Board
Katsuyuki Nakajima, Editorial Board
Akihiro Inazu, Editorial Board

ADDITIONAL INFORMATION

About 2,000 members including MD and PhD belong to JSCC and 9 blocks were divided as each centre of JSCC.

The annual meeting is held once a year and more than 300 papers are discussed in the meeting and the regional meetings were held once a year in each region and interesting symposiums and special lectures are planned by an annual president of the meeting.



KOREA
KOREAN SOCIETY OF CLINICAL CHEMISTRY (KSCC)

NATIONAL MEETINGS

<i>Name of the meeting</i>	<i>Date</i>	<i>Topic</i>
KSCC 2023 Biannual Spring Meeting	May 11 th , 2023	Session 1. Utilization of Analytical Performance Specifications in Laboratory Quality Management
		Session 2. Current Status and Clinical Use of Tumor Markers
		Session 3. Rediscovery of Urine Analysis
		Session 4. Real Clinical Chemistry Data Analysis
		Session 5. Immunosuppressive Drug Therapy and TDM
KSCC 2023 Biannual Fall Meeting	November 1–2 nd , 2023	Session 1. Pre-Analytical Phase Management in Clinical Chemistry: Sample Collection and Transportation
		Session 2. New Formats and Challenges of Medical Informatics
		Session 3. Current Guidelines and Practices in Heart Failure Diagnosis
		Session 4. Genetic Testing in Clinical Chemistry II
		Session 5. Pregnancy-Related Laboratory Tests
		Workshop A. Assay Performance Evaluation
		Workshop B. Clinical Chemistry Data Analysis Using R (Establishing a reference interval)



EDUCATION

Spring Review Course (Online; May 12 - May 25, 2023)

RC1. General clinical chemistry

1. Laboratory Service Planning - Clinical chemistry
2. Laboratory Test Utilization Management
3. Function and Application of Laboratory Information System

RC2. Special Clinical chemistry

1. Basic Principles of Protein and Enzyme Testing
2. Principle and Interpretation of Electrolytes and Arterial Blood Gas Analysis
3. Measurement and Interpretation of Trace Elements
4. Inherited Metabolic Diseases and Newborn Screening

Fall Review Course (Online; November 3 - November 16, 2023)

RC1. General Clinical chemistry

1. Management of hazardous chemicals in laboratories
2. Clinical chemistry laboratory safety
3. Preanalytical variations and laboratory errors

RC2. Special Clinical chemistry

1. Laboratory tests for thyroid disease
2. Lipid and lipoprotein metabolism and measurement methods
3. Dyslipidemia and biomarkers of cardiovascular disease
4. Basic concepts and practice of therapeutic drug monitoring
5. Tumor marker tests: lung cancer biomarkers

REGIONAL MEETINGS

<i>Name of the meeting</i>	<i>Date</i>	<i>Society's contribution for the meeting</i>
18 th APFCB council meeting	15 th April 2023	The representative of KSCC (Dr. Yong-Wha Lee) participated in the meeting.

REGIONAL RELATIONS

KSCC is a member society of the Asia-Pacific Federation for Clinical Biochemistry and Laboratory Medicine (APFCB).

Several board members of KSCC participated in the working groups of the APFCB.

- Dr. Sollip Kim in the working group on patient-based quality control
- Dr. Sang-Guk Lee in the working group on clinical decision support

INTERNATIONAL RELATIONS

Several board members of KSCC participated in the committee or the working groups of the IFCC.

- Dr. Sang-Guk Lee in the committee on bone metabolism
- Dr. Sang-Guk Lee in the working group on apolipoproteins by mass spectrometry
- Dr. Sun Min Lee in the working group on standardization of fetal haemoglobin

ADDITIONAL INFORMATION

KSCC will hold the national biannual meetings on April 11-12 (spring meeting) and October 16-17 (fall meeting) at ST center, Seoul, Korea.



LATVIA

LATVIAN SOCIETY OF LABORATORY MEDICINE (LLSB)

NATIONAL MEETINGS

<i>Name of the meeting</i>	<i>Date</i>	<i>Topic</i>
Society meeting	23 rd March 2023	Infectious diseases and allergies
Latvian Laboratory Medicine Society Anniversary Conference	15 th September 2023	Interdisciplinary conference on the role of the laboratory in the path to diagnosis
Society meeting	23 rd Novembre 2023	Markers of inflammation, TNF alpha inhibitors, triggers of gastroenteritis



LEBANON

LEBANESE SOCIETY OF CLINICAL BIOLOGY SYNDICAT DES BIOLOGISTES DU LIBAN (SDBLB)

Lebanon is a very active member within the IFCC and takes pride in its membership. The numerous online scientific training sessions (webinars) have been highly beneficial, especially among the youth. The IFCC provides a platform for communicating with peers on an international scale and fosters a sense of belonging to a community united by science.

NATIONAL MEETINGS

<i>Name of the meeting</i>	<i>Date</i>	<i>Topic</i>
International Conference on Immunoassay	January 12 , 2023	Endocrinology and autoimmunity
Advances in Laboratory Medicine and Blood Bank	May 13, 2023	New trends in Laboratory Medicine
Vitamine D	May 15th , 2023	Vit D: an up- to- date
SNIBE Day	July 16, 2023	Diabetes and Heart diseases
My Lab under the summer threat	August 5, 2023	Infectious diseases diagnosis
Can I drink from this water?	September 16, 2023	Chemical and Microbiological water safety and threats
Preparedness to emergency situations	December 10, 2023	Laboratory Medicine in situation of crisis: earthquake and wars

FOR YOUNG SCIENTISTS AND LABORATORY TECHNICIANS

<i>Date</i>	<i>Place</i>	<i>Topic</i>
January 16, 2023	Beirut	Advances in coagulation
March 14, 2023	Jbeil	Bleeding disorders: Clinical cases

June 8, 2023	Beirut	Auto-immunity: overview of laboratory tests
December 14, 2023	Beirut	HPV Infection: Updates in 2023

REGIONAL RELATIONS

Partnership with the Lebanese Society of Hematology and Transfusion
 Partnership with the Lebanese Society of Medical Oncology
 Partnership with the Lebanese Society of Internal Medicine

INTERNATIONAL RELATIONS

Partnership with Association of Medical Analysis Laboratories - ALAM (Algeria)
 Partnership with Societe Tunisienne de Biologie Clinique –STBC (Tunisia)
 Partnership with Palestinian Medical Technology Association -PMTA (Palestine)
 Partnership with the Syndicate of Biologists in France- SDBIO (France)
 Partnership with the EFLM (Europe)
 Partnership with the French GEHT groupe d’Etude de l’Hématologie et des Thromboses

ADDITIONAL INFORMATION

The Syndicate of Biologists of Lebanon is striving to promote best practices within laboratories by implementing a voluntary accreditation system, ensuring affordable external quality controls, keeping abreast of new technical developments in the field of clinical biology, and conducting literature reviews. Discussion groups on social media have been created to promote interaction among professionals, submit interesting clinical cases, and help each other solve problems as they arise. Virtual meetings are held in small groups, a practice that was initiated during the COVID-19 pandemic and continues.

This way, the expertise of the elders serves to forge a solid professional future for the younger generation.



LITHUANIA LITHUANIAN SOCIETY OF LABORATORY MEDICINE (LLMD)

NATIONAL MEETINGS

<i>Name of the meeting</i>	<i>Date</i>	<i>Topic</i>
15 th Annual Conference of the Lithuanian Society of Laboratory Medicine (LLMD)	27-04-2023	Current trends of science and practice of laboratory medicine
Regional LLMD Conference	17-04-2023	Laboratory diagnostics news 2023
National LLMD Conference (on-line)	11-05-2023	Biomedical diagnostics in 2023: science and practice
National LLMD Conference (hybrid)	17-10-2023	What clinicians need to know and the laboratory needs to do (dedicated to World Thrombosis Day)



National LLMD Conference (on-line)	24-11-2023	Laboratory medicine of 2023. Overview of news and opportunities
Regional LLMD Conference	07-12-2023	Unity of laboratory diagnostics and clinical practice

EDUCATION

IFCC-Committee on Clinical Molecular Biology Curriculum (C-CMBC) Advanced Training Course in Molecular Diagnostics; 30-11-2023 – 02-12-2023 Vilnius, Lithuania (30 participants from Lithuania).

REGIONAL RELATIONS

Lithuanian Society of Laboratory Medicine (LLMD) is the member of the Baltic Association of Laboratory Medicine (BALM). Other 2 members of BALM are: Latvian Society of Laboratory Medicine and Estonian Society of Laboratory Medicine. The main task of the Association – organization of Baltic Congresses of Laboratory Medicine, held every second year in one of the Baltic Countries (upcoming scheduled for 2024 in Lithuania).

INTERNATIONAL RELATIONS

LLMD is the member of IFCC and EFLM, partner of the Global World Thrombosis Day Movement.



MEXICO

MEXICAN ASSOCIATION OF CLINICAL LABORATORY SCIENCES (CMCLabC)

NATIONAL MEETINGS

<i>Name of the meeting</i>	<i>Date</i>	<i>Topic</i>
Academic Laboratory Seminars	February, 2023	Tumor markers. Cancer, a teacher
Dia de la Tuberculosis	March, 2023	Importance of Hematic Cytometry in Tuberculosis Patients. Comprehensive diagnosis of tuberculosis by the microbiology laboratory.
Dia de la inmunología	April, 2023	Amino acids and autoimmune diseases. COVID-19 genome. Translational environmental immunotoxicology. Inflammation in childhood leukemia. Flow cytometry, concepts, and obligations. Histocompatibility and Transplant Tests.
LIII National Mexican congress in Clinical Pathology	November 3-5, 2023	I Simposium for laboratory professionals in laboratory medicine



Chemist's Day Lectures	December 1 st , 2023	Cross-testing, the nemesis of blood bank workers. Blood sample taken in the clinical laboratory. Hematology testing, a study beyond the routine. Changes in the landscape of parasitosis.
Third Seminar on Professionalization of Clinical Laboratory Personnel with a Human Approach	December, 2023	Overview of forensic chemistry and hematology. Psychotropic drugs, depression and COVID 19, an unexpected relationship. Microbiological diagnosis of sepsis. Changes in the landscape of parasitosis. Frequent hemolytic anemias. Normality of the Urgency. Glomerular filtration rate. Micromycetes, strategies for fungal identification. Life mission. Rehydration in cadaver.

EDUCATION

Conferences:

1. Panagglutination in immunohematological tests
2. Renal and its social determinants of health in nephrology
3. Von Willibrand Disease and the Importance of Multimer Standardization
4. The Clinical Laboratory in the Digital Age
5. Neonatal cardiac screening
6. Compatibility Testing
7. Quality Management System in Blood Bank
8. Additional Factors to Consider When Choosing a Method for HBA1c
9. Usefulness of immunofluorescence evaluation of antinuclear antibodies in cancer
10. Understanding the Underlying Neurodegeneration
11. Biosafety Principles in Molecular Diagnostic Laboratories
12. The capricious relationship between SARS-CoV-2 and the human genome
13. Transformative Leadership in Laboratory Personnel
14. Hemolytic anemias due to oxidants

Workshop: Smear smears for the diagnosis of tuberculosis

REGIONAL MEETINGS

<i>Name of the meeting</i>	<i>Date</i>	<i>Society's contribution for the meeting</i>
COLABIOCLI Course	March, 2023	Young Laboratory Professional Leadership
CONVERSATORY CNB COLOMBIA	March, 2023	Successful Experiences
LAB WEEK COLABIOCLI	April, 2023	Quality Assurance and Quality Control parameters.
Conversatory COLABIOCLI	April, 2023	Professional, personal, and ethical values for practicing biochemistry or equivalent professional degrees in Latin America and the Caribbean
Conversatory CNB Colombia	April, 2023	Young professionals in the clinical laboratory, a challenge within COLABIOCLI
2 nd Latin American Conference of Young Clinical Laboratory Professionals	June, 2023	CRISPR-C-based Diagnostic: Challenges and Opportunities as new Point of Care.
WEBINAR -COLABIOCLI	July, 2023	THE CAPRICIOUS RELATIONSHIP BETWEEN SARS-COV-2 AND THE HUMAN GENOME
WEBINAR- COLABIOCLI	July, 2023	THE CLINICAL LABORATORY AS A SUPPORT IN SOLID ORGAN AND HEMATOPOIETIC CELL TRANSPLANTS
Webinar COLABIOCLI	July, 2023	Quality Indicators
CONSERVATORY COLABIOCLI	July, 2023	Accreditation: Why it is important?
CONVERSATORY COLABIOCLI	July, 2023	The Clinical Laboratory as a Support in Solid Organ and Hematopoietic Cell Transplants
Conversatory COLABIOCLI	August, 2023	Artificial Intelligence in Health Sciences: Opportunities in the Clinical Laboratory.
Conversatory COLABIOCLI	August, 2023	Young professionals in the workplace and the challenges of emotional salary
Conversatory COLABIOCLI	August, 2023	Laboratory accreditation necessity or obligation, 15189 alternative standard that advances in Latin America
Webinar COLABIOCLI	September, 2023	"The Empowered Safe Blood Donor"
I REGIONAL CONFERENCE COLABIOCLI	November 21 st - 22 nd , 2023	Chairs and members of round table discussions on Accreditation Management, Professional societies, Young Professionals and Education and Management.

REGIONAL RELATIONS

Affiliated member of the Confederación Latinoamericana de Bioquímica Clínica COLABIOCLI (Latin American Confederation of Clinical Biochemistry).

CMCLabC members participating at the following activities in COLABIOCLI:

WG-Ethics, COLABIOCLI

WG- Education and management, COLABIOCLI

WG- Blood bank, COLABIOCLI

WG-Accreditation management, COLABIOCLI



INTERNATIONAL RELATIONS

Full member society Mexican Association of Clinical Laboratory Sciences, CMCLabC

Members participating at the following activities in IFCC:

Nominations Committee Member, IFCC

C-TLM-SD member, IFCC

WG-eJIFCC editorial board member, IFCC

WG-eNews member, IFCC

WG-IANT member, IFCC

C-CLM corresponding member, IFCC

C-MB corresponding member, IFCC

TF-YS corresponding member, IFCC

ADDITIONAL INFORMATION

Collaboration with the following professional societies:

- National College of QFB, A.C. CNQFB México, A.C.
- Board Certification Council in Clinical Biochemistry, COMECEP
- National Society of Clinical Chemistry and Laboratory Medicine, CONQUILAB
- Academic auspices to: Conquim congress of the Michoacan College of clinical professionals.
- Academic auspices to: IV International congress on quality in laboratory medicine and blood bank.



PAKISTAN

PAKISTAN SOCIETY OF CHEMICAL
PATHOLOGISTS (PSCP)

NATIONAL MEETINGS

<i>Name of the meeting</i>	<i>Date</i>	<i>Topic</i>
Point Of Care Testing: Bridging The Disparity Gap In Healthcare	Islamabad 9 TH -10 TH March 2023	QA practice for POCT program inPakistan POCT general practices and primary care POCT Accreditation Setup of POCT
Rare Diseases Link	Karachi 31 st August 2023	Embarking On pioneer journey: Registry of rare diseases
1 st international conference on bone and mineral diseases in Pakistan	Karachi 20 th -21 st October 2023	Developing synergies in bone health
44 th Annual Conference of Pakistan Association of Pathologists, ChemCon 2023	Lahore 17 th -18 th November 2023	Bridging the gap in Laboratory Medicine



Case Based Workshop on Newborn Screening	Lahore 16 November 2023	Understand the basic concepts of newborn screening system, laboratory infrastructure, instrumentation, and quality assurance Understanding the value of registries and how to use data from registries Develop a basic plan for introduction of newborn screening services at their respective institutes.
Hands-on Workshop (Drugs of Abuse Analysis)	Lahore 16 November 2023	To acquire practical skills on Sample Handling, Screening Tests, Confirmatory Tests for Drugs of Abuse

EDUCATION

- Online Certificate course –fundamental of Quality control in clinical laboratories- conducted for Post graduate Trainees and Technologist 7th -9th February 2023.
- CPSP- CME – Conducted throughout in 2023 on every second Saturday of the month for postgraduate trainees and junior consultants
- 11th SIT course in Chemical Pathology 6th to 9th November 2023 for post graduate trainees
- Flipped style course on Quality Control in Clinical Laboratory
- Five Symposiums on Chemiluminesc immunoassay conducted at different cities of Pakistan during 2023
- ADLM certificate course on QC completed by 10 junior consultants /PG Trainees, May-August 2023.
- QADIS sessions on zoom for quality assurance in Clinical Chemistry 26th April to 9th May 2023.

REGIONAL MEETINGS

<i>Name of the meeting</i>	<i>Date</i>	<i>Society's contribution for the meeting</i>
IFCC-annual conference 2023	21-25th May 2023, Rome	Two poster presentations: Dr. Sibtain Ahmed and Dr. Shabnum Dildar CIDC- meeting attended by Dr. Sibtain Ahmed as a full member Task force committee meeting on Newborn Screening attended by Dr. Aysha Habib Khan as a Co chair

INTERNATIONAL RELATIONS

IFCC webinar: Dr. Sibtain Ahmed participated as invited speaker at IFCC webinar on “Increasing Visibility of Laboratory Medicine through Scientific Communication and Social Media, 21st December 2023.



PALESTINE
PALESTINIAN MEDICAL TECHNOLOGY
ASSOCIATION (PMTA)

The continuing education program at the **Palestinian Medical Laboratory Association (PMTA)** is considered a binding program for members who wish to continue practicing the profession.

The PMTA provides the necessary scientific activities for its members to obtain 20 points annually in the program. In addition, the PMTA allows them to participate in Arab and international activities to achieve this goal. Last year, the PMTA did the following in this field:

Held 12 scientific days, webinars, and workshops as follows:

- Research in Laboratory Medicine.
- Antimicrobial Resistance in Palestine: Crisis and solution.
- Precision Medicine and Lab. Role.
- Lab. Accreditation: ISO 15189.
- Diabetes Diagnosis according to WHO Criteria.
- Autoimmune disease diagnosis and results interpretation.
- Health informatics in Laboratory Medicine.
- Blood film interpretation.
- Emergency preparedness in Transfusion Medicine.
- Traceability in Laboratory Medicine.
- Urinalysis: An Overview.
- Molecular Parasitology: New Markers in Diagnosis and Follow.
- Leadership in Laboratory Medicine.

The 12th International Palestinian Conference for Laboratory Medicine: Held in Ramallah 24-26/8/2023. The 3 days of the conference were held at the Palestinian Red Crescent Society (PRCS) in Ramallah. This conference is the largest conference held in Palestine. The number of participants was 3000 participants. The scientific program is attached.

The 12th International Palestinian Conference of Laboratory Medicine

IPCLM 12

“Shaping the Future of Medicine by Laboratory Medicine”

Scientific Program

Thursday, August 24, 2023		
Time	Activity	
16:00 – 17:00	Registration	
7:00 – 18:00	Opening Ceremony	
	Holy Quran	
	Palestinian National Anthem	
	H.E President of Palestine, Dr. Mahmoud Abbas	





	International Federation of Clinical Chemistry & Laboratory Medicine (IFCC)	Prof. Khosrow Adeli
	Arab Federation of Clinical Biology (AFCB)	Dr. Christian Hadad
	Palestinian Ministry of Health	Minister of Health
	PMTA & Conference President	Dr. Osama Najjar
18:00 – 18:30	Keynote lecture 1: Shaping the future of laboratory medicine	Dr. Osama Najjar - PMTA Conference President
18:30 – 19:00	Keynote lecture 2: Central Role of lab Medicine & lab. professionals in public health & patient care	Prof. Khosrow Adeli
19:00 – 19:15	Opening of the Medical Exhibition	
19:15 – 19:30	Opening of the Poster Presentations	
19:30 – 20:10	Keynote lecture 3: Inspired by measurement: impact of the (r)evolution in metrology on laboratory medicine	Prof. Christa Cobbaert

Friday, August 25, 2023		
Time	Activity	
08:00 – 09:00	Registration	
Session 1 09:00 – 10:15	(Immunology and Endocrinology) Chairs: Dr. Manal Shaaban Dr. Tamer Hantash	
09:00 – 09:20	Contribution of molecular allergens in the diagnosis of cow's milk protein allergy in Tunisia	Yasmina Ouerdani
09:20 – 09:30	Current laboratory practice for anti-nuclear antibody testing in Tunisia	Imen Zamali
09:30 – 09:40	A lack of pd-I expression in patients with vitiligo	Ahlem BEN HMID
09:40 – 10:00	Evaluation of platelet parameters, coagulation markers, antiphospholipid syndrome, and thyroid function in Palestinian women with recurrent pregnancy loss	Ayman A. Najjar
10:00 – 10:15	Panel Discussion	
10:15 – 10:30	Break	
Session 2: 10:30 – 12:30	(Standardisation) Chairs: Dr. Nabih Kamal Dr. Khaldoun Nijm	



10:30 – 11:10	Keynote lecture 4: Closing the Evidence Gaps in Pediatric Reference Intervals: The CALIPER Initiative	Prof. Khosrow Adeli
11:10 – 11:30	Genotyping of Human Erythrocyte Antigens for Safe Blood Transfusion in Thalassemia Patients	Dirgam Yaseen
11:30 – 11:50	Reference versus consensus values in proficiency testing of clinical chemistry: a comparison based on laboratories' results in Palestine	Ziad Al-Khdour
11:50 – 12:00	Common Mistakes Made by ISO 15189 Accredited Medical Laboratories During Verification of New Test/Equipment	Samar Sadeddin
12:00 – 12:10	Relative reticulocyte count vs. reticulocyte production index: A two different faces	Johnny Amer
12:10 – 12:30	Panel Discussion	
12:30 – 14:00	Friday Prayer & Lunch Break	
Session 3: 14:00 – 15:45	(Precision Diagnostics) Chairs: Dr. Ali Arifi Dr. Manar Alagha	
14:00 – 14:40	Keynote lecture 5: Introducing Precision Diagnostics in the 21st century: ready for Prime Time?	Prof. Christa Cobbaert
14:40 – 15:00	Free light chains as diagnostic biomarkers in Multiple Sclerosis	Yousr Galai
15:00 – 15:10	A Combined Drug Treatment That Reduces Mitochondrial Iron and Reactive Oxygen Levels Recovers Insulin Secretion in NAF-1-Deficient Pancreatic Cells	Ola Karmi
15:10 – 15:20	Design and Optimization of a CYP2C19*2 Genotyping Assay Based on the Super Selective Primer Method	Salah Alden jubeh
15:20 – 15:45	Panel Discussion	
15:45 – 16:00	Break	
Session 4: 16:00 – 18:00	(Molecular Biology) Chairs: Dr. Abedrzaq Hedili Dr. Yaquob Alashhab	
16:00 – 16:10	GABARAP-containing Structures in Autophagy and their Characterization by Advanced Fluorescence Microscopy for Next Generation Pharmacologic Targeting	Assalla Abu Shamseye
16:10 – 16:20	Association of DNA methylation and genetic variations of the APOE gene with the risk of diabetic dyslipidemia	Manal Ghattas

16:20 – 16:30	Identification of gene mutations associated with Type 1 Diabetes by Next Generation Sequencing in Inflicted Palestinian Families	Abrar Bawaneh
16:30 – 16:40	Panel Discussion	
16:40 – 16:50	Abundance levels and potential regulatory function of miR-23a/b-3p in male infertility: Insights from sperm and testicular biopsies	Basim Ayesh
16:50 – 17:00	Serum free light chains in systemic lupus erythematosus disease	Yousr Galai
17:00 – 17:10	“Telomouse”- a mouse model with human-length telomeres – generated by a single amino acid change in RTEL1 helicase	Alaa Qadah
17:10 – 17:20	Panel Discussion	
17:20 - 18:00	Keynote lecture 6: Quality in clinical laboratories: an unfinished issue {pre recorded}	Prof. Mario Plebani
20:00 – 22:00	GALA DINNER حفلة العشاء مع فرقة موسيقية	

Saturday, August 26, 2023		
Time	Activity	
08:00 – 09:00	Registration	
Session 5 09:00 – 11:00	(Cancer Research) Chairs: Dr. Hussein Hijawi Dr. Sakhr Abu Zahra	
09:00 – 09:10	Adiantum capillus veneris I. Aqueous extract effect on high cholesterol diet fed rats and determination its polyphenolics components by hplc-ms	Entisar Al-Hallaq
09:10 – 09:20	TET1 isoforms have distinct expression pattern localization and regulation in breast cancer	Mahmoud Al-Zahayaqa
09:20 – 09:30	Pathophysiology and Molecular Characterization of Cutaneous and Mucosal Melanoma	Hanadi AlKhatib
09:30 – 09:40	Disrupting NAF-1 function in cancer cells primarily impacts mitochondrial labile iron levels and triggers TXNIP expression	Ola Karmi
09:40 – 09:50	Panel Discussion	
09:50 – 10:10	Colorectal cancer cells exhibit inhibited expressions of extracellular NTCP associated with reduced bile acids trafficking	Johnny Amer
10:10 – 10:30	Genomic analysis of inherited breast cancer among Palestinian women	Suhair Lolas-Hamameh



10:30 – 10:50	Andrographic induces G2/M arrest, apoptosis and autophagy in MDA-MB-231 cells and mediates inactivation of Akt/mTOR signalling pathway	Iyad Al-Quqa
10:50 – 11:00	Panel Discussion	
11:00 – 11:10	Break	
Session 6 11:10 – 12:30	(Haematology) Chairs: Dr. Mohammed Twimi Dr. Ahmad Abdelrahim	
11:10 – 11:50	Keynote lecture 7: Laboratory Diagnosis of Haemophilia and Allied Bleeding Disorders	Prof. Steve Kitchen
11:50 – 12:10	Thrombocytopenia as a Prognostic Marker for Systemic Lupus Erythematosus: A Case Study	Haneen Nur
12:10 – 12:20	Alpha-defensins: risk factor for thrombosis in COVID-19 infection	Suhair Abdeen
12:20 – 12:30	Panel Discussion	
12:30 – 13:30	Lunch Break	
Session 7 13:30 – 14:50	(Antibiotics and Drug Resistance) Chairs: Dr. Rihab Al-Bijawi Dr. Lubna Alkharaz	
13:30 – 13:40	Assessing the Prevalence of Antibiotic Residue in Waste Water Treatment Plants and Ground Water in North Palestine: Risk Assessment for Human Health and Resistance Development	Ala'a Jaddou
13:40 – 13:50	Bacteriological Profile and Antibiotic Susceptibility Pattern of septicemia in neonatal intensive care units in Palestine: A retrospective study	Bayan Ibrahim
13:50 – 14:00	Molecular epidemiology pattern of the highly invasive group B Streptococcus (<i>Streptococcus agalactiae</i>) isolated at Arabcare hospital laboratory, Ramallah, Palestine	Elena Awwad
14:00 – 14:10	Emergence of Multidrug Resistant <i>Candida auris</i> in a tertiary care referral center in West Bank	Riham Smoom
14:10 – 14:30	Molecular Characterization of Carbapenem-Resistant Gram-Negative Isolates from Hospitalized Patients in Gaza, Palestine	Nahed Al Laham
14:30 – 14:45	Panel Discussion	
14:45 – 15:00	Break	



Session 8 15:00 – 17:30	(Public Health & Microbiology) Chairs: Dr. Haneen Hamdan Dr. Ibrahim Alsahori	
15:00 – 15:20	Effectiveness of insecticide thermal fogging in hyrax dens in the control of leishmaniasis vectors in rural Palestine: A prospective study	Samer Sawalha
15:20 – 15:40	Concurrent molecular characterization of sand flies and Leishmania parasites by amplicon-based next-generation sequencing	Mohammad Al-Taradreh
15:40 – 15:50	Genetic diversity and haplotype analysis of Leishmania tropica identified in sand fly vectors of the genera Phlebotomus and Sergentomyia, using next-generation-sequencing technology	Amer Al-Jawabreh
15:50 – 16:00	Panel Discussion	
16:00 – 16:10	Prevalence of mecA and Panton-Valentine Leukocidin genes in Staphylococcus aureus clinical isolates from Gaza Strip hospitals	Nabil Elaila
16:10 – 16:20	Case Report: Tracking the origin of a rare severe imported case of Plasmodium falciparum in Palestine, a zero-indigenous case area	Anas Al-Jawabreh
16:20 – 16:30	Investigating β -Thalassemia Major Cases Emerged after Obligatory Premarital Testing in Palestine	Mais Alshatleh
16:30 – 17:10	Keynote lecture 8: Decolonizing Public Health {online}	Prof. Marcel Tanner
17:10 – 17:30	Panel Discussion	
17:30 – 17:45	Break	
Closing Ceremony & Awards		



PARAGUAY

ASOCIACIÓN DE BIOQUÍMICOS DEL PARAGUAY (ABP)

NATIONAL MEETINGS

<i>Name of the meeting</i>	<i>Date</i>	<i>Topic</i>
Dr. Mercedes Alvarez and Raquel Caceres were attending at the Stand of the Expo Career Fair of the Faculty of Chemical Sciences of the UNA	04/22 to 04/26/2023	Expo Annual Fair QuímicaMente 2.0
Ordinary General Assembly of the Association of Biochemists of Paraguay	05/31/2024	Presentation of reports and balances of the previous period, Election of Authorities 2023-2025
Dr Carmen Troche President of ABP was attending at the First Open Day "OPEN DAY" at the LCSP	07/27/2023	Within the framework of Commemoration of 40 years of institutional life.
Dr. Carmen Troche and Mercedes Alvarez were attending in the activity carried out in the central auditorium of the Faculty of Chemical Sciences, UNA campus in San Lorenzo	09/11/2023 to 09/15/2023	"Biochemist's Week 2023"
Attendance of Dr. Carmen Troche at the meeting with the Vice Minister of the MSPyBS	10/18/2023	HIV rapid test case
Assistance of Dr. Carmen Troche representing ABP in the meeting with the National Strategic Directorate of Human Resources in Health (DNERHS)	10/19/2023	Topic on the methodology for the construction of the MSPyBS Catalog for the Clinical specialties of the Biochemistry Career
Meeting with the National Strategic Directorate of Human Resources in Health (DNERHS)	10/30/2023	Presentation of the methodology for the construction of the MSPyBS Catalog for the Clinical specialties of the Biochemistry Career
Meeting with Caprolab and the ABP Permanent Tariff Review Commission	11/13/2023	Evaluation of the Tariff Proposal Survey - ABP 2024
Virtual information meeting via Google meet as ABP representative Dr. Carmen Troche and Dr. Mercedes Alvarez, representatives of the scientific societies of Hematology, Microbiology and Chemistry: Dr. Loida Caballero, Dr. Juana Ortellado and Dr. Natalia Celauro	11/21/2023	With the applicants for the "Evaluation of competencies for health professionals with graduate degrees obtained abroad"
Assistance from Dra Melisa Florentín in the WORKSHOP at the Crown Plaza Hotel	11/23/2023	WORKSHOP TO UPDATE THE NATIONAL RESEARCH AND INNOVATION POLICY FOR HEALTH
Presence of the President of ABP Dr. Carmen Troche in the "Evaluation of Competencies for Health Professionals with Degrees from Foreigners, carried out at the facilities of the Central Public Health Laboratory	12/05/2023	Exam "Evaluation of Competencies for Health Professionals with Degree Degrees from Foreigners to Access Professional Qualification by the Ministry of Public Health and Social Welfare"



EDUCATION

Biochemical Update Conference-Encarnación May 26 to 27, 2023, Speakers: Dr. Laura Mujica, Bioq. Laura Arias, MSc., Lic. Jocelyn Miranda, MSc., Dr. Bethina Isasi, Dr. Cynthia Vazquez, MSc.

- Randox Webinar virtual modality, held on June 26, 2023, Speaker: Dr. Gabriel Alejandro Migliarino
- Continuing Education Conference: “Quality Management in Clinical Laboratories”, held on August 4 and 5, 2023, Speakers: Dr. Alba Garzón (COL), Dr. Juan Pablo Grammatico (ARG), Dr. Sergio Tinoco (MEX), Moderator: Dr. Laura Mujica (PY)
- Biochemical Update Conference within the framework of the celebration of the 40 years of founding of the ABP, held at the Gran Hotel del Paraguay on September 1 and 2, 2023, Speakers: Dr. Jaime Guggiari, Dr. Idalina Dalles, Dra Ana Ayala, PhD., Bioq. Laura Arias, Dr. Mariza Insaurralde, Bioq. Jose Luis Ramirez

REGIONAL MEETINGS

<i>Name of the meeting</i>	<i>Date</i>	<i>Society's contribution for the meeting</i>
COLABIOCLI Virtual Meeting Executive Committee and Regional Representative of LATAM before the IFCC	01/26/2023	

REGIONAL RELATIONS

1. Participation of the President of ABP: Bioq. Carmen Troche at the Extraordinary General Assembly that took place during the development of the 48th BRAZILIAN CONGRESS OF CLINICAL ANALYSIS in the city of Florianópolis – Federal Republic of Brazil, from June 18 to 21, 2023.
 2. Strategic Planning Course in Laboratories and Leadership of Young Professionals”, Scholarship: Rosa Carolina Romero Franco, Date: March 16 to May 4, 2023
 3. "COLACIOBLI Paraguay Webinar: “Implication of the Human Microbiota, in health and disease”, held on April 27, 2023, Speaker: Dr. Marcelo Arango and Moderator: BQ. Johanna Gimenez
 4. Colabiocli scholarship management 2023 awarded to carry out an internship at the National Brucellosis Laboratory INEI-ANLIS Dr. Carlos G. Malbrán, scholarship recipient: Bioq. Silvana Benitez Cataldi.
 5. “2nd. Latin American Conference of Young Laboratory Professionals”, participation of Bioq. Diana Alejandra Estigarribia replacing the titular representative Dr. Johanna Isabel Giménez Palacio of the Young Professionals Working Group, date: June 18 and 21, 2023 in the city of Florianopolis - Brazil.
- **General Objective:** Generate a space for discussion and meeting between the representatives of the Young Professionals of the Clinical Laboratory of the Latin American countries members of the Latin American Confederation of Clinical Biochemistry (COLABIOCLI), which allows strengthening the ties of brotherhood of the young professionals of the laboratory sciences of the region, present their needs, experiences, present conferences on current central topics in Laboratory Medicine and hold administrative meetings aimed at carrying out the strategic planning of the working group.



- **Specific objectives:**

- i. Presentation of the 2nd Latin American Conference of Young Clinical Laboratory Professionals in Florianópolis Brazil, within the framework of the SBAC National Congress.
- ii. 2nd in-person meeting of the representatives of the Young Clinical Laboratory Professionals of the Latin American countries members of the Latin American Confederation of Clinical Biochemistry (COLABIOCLI) in Florianópolis Brazil.
- iii. Planning of the 1st Forum of Young Clinical Laboratory Professionals in Latin America and Spain, Cartagena de Indias, Colombia, October 2023 within the framework of the Latin American Congress of COLABIOCLI, Colombia 2024
- iv. Planning of the 3rd. In-person meeting of the representatives of the Young Clinical Laboratory Professionals of the Latin American countries members of the Latin American Confederation of Clinical Biochemistry (COLABIOCLI), Colombia 2024.
- v. Cronograma de actividades varias Gestión 2023-2024
 - XVI National Biochemical Congress CUBRA, which took place on October 5 and 7, 2023, in the province of Mendoza, Republic of Argentina, designated representative: Dr. Raquel Cáceres VIRTUAL COURSE: “QUALITY MANAGEMENT AND GOOD LABORATORY PRACTICES FOR SURVEILLANCE OF ANTIMICROBIAL RESISTANCE” BY PAHO, which took place from 14 September to November 16, 2023., the designated biochemist: Cristina Mariel Brítez Alderete.
 - Participation of the President of ABP: Dr Carmen Troche 5th. Virtual Congress of Clinical Biochemistry (VIRTUALAB 2023) from November 6 to 18, 2023 “1st REGIONAL CONFERENCE OF THE LATIN AMERICAN CONFEDERATION OF BIOCHEMISTRY CLINIC – COLABIOCLI IN LATIN AMERICA AND THE CARIBBEAN”, which will take place on November 21 and 22, 2023, in Guatemala City, Rep. of Guatemala, attendance as designated representative of ABP: Bioq. María Eugenia León.
 - Latin American Scientific Advisory Committee (CACL) of the XXVI Latin American Congress of Clinical Biochemistry and the XXII International Congress of the National College of Bacteriology, designated representative of ABP: Dr Diana Estigarribia.

6. “COLABIOCLI Young Scientists Group”, substitute representative: Dr Diana Estigarribia.

- **Academic Activities**

- i. Participation in all COLABIOCLI YOUNG PROFESSIONAL WORK activities, meetings and projects. Position on the duty and rights of the biochemist, perspective in Paraguay. Discussion on Law No. 5,986/2017, which we have in Paraguay, unlike other countries in the region, in order to determine the identity of the biochemist, from the limits and scope of the profession, considering that its function is relevant, since it constitutes direct support for the doctor's function, through clinical analyzes that allow the diagnosis of pathologies. Enrichment on the biochemical situation in Guatemala, Argentina, Brazil, Chile, Colombia, Bolivia, Mexico and Honduras.

- ii. **Holding a Keynote Conference as a national representative:** Analysis of protein biomarkers for identification, resistance and variability studies in methicillin-resistant *Staphylococcus* spp (MRS) and vancomycin-resistant Enterococci (VRE).
- iii. Participant of the National Congress of SBAC Florianópolis, Brazil.

- **Administrative Activities**

- i. Planning 1st Forum of Young Clinical Laboratory Professionals within the framework of the XXVI Latin American Congress of Clinical Biochemistry - XXII International Congress of the National College of Bacteriology. Colombia, October 2024.
- ii. iMonitoring of Educational Activities of the Alliance of Countries 2023.
- iii. Planning of the 3rd. In-person meeting of representatives of young Clinical Laboratory Professionals from COLABIOCLI Member countries.
- iv. Agreements and Alliances.

INTERNATIONAL RELATIONS

1. GLOBAL MEDLAB WEEK PY (GMLW 2023), World Week of CLINICAL LABORATORY Professionals IFCC 2023, representatives: Bioq. Amiliana Pineda, Bioq. Melisa Florentín, Dr. Natalie Weiler and Dr. Mercedes Alvarez held on April 23 to 29, 2023
2. Report: Dr. Milva Ibarrola, representative in the Working Group on the “Normalization of Fetal Hemoglobin (WG-HbF)”, of the International Federation of Clinical Chemistry and Laboratory Medicine- IFCC,
 - Within the framework of carrying out the protocol for the normalization or standardization of the measurement of Fetal Hemoglobin HbF, the group's activities began on 11/30/2023, through a virtual meeting.
 - In the aforementioned meeting, the work system and the calendar of technical meetings were established, a total of four meetings will be held during the year, of which, three would be virtual and one in person (not yet host country is defined). The next meeting is scheduled to be held on 04/30/2024.
3. **Report : Prof. Dra. Maria Montserrat Blanes González**
 - a. Management in the functional bodies that are members
 - b. Activities as a member of the C CC Congres and Conference Committee, IFCC
 - c. In-person meeting: XXV IFCC-EFLM EuroMedLab-WorldLab Congress 2023 Rome Italy May 21 – 25
 - d. Activities as a member of the WG IANT Working Group Iberoamerican Nomenclature and translation
 1. In-person meeting within the framework of the XXVIFCC-EFLM Euromedlab-World Lab Congress Rome Italy May 2023
 2. Active participation in online communications
 - e. Activities such as Corresponding member Committee,
 - f. Internet and Digital Communications (C-IDC)

In-person meeting:

- g. XXV IFCC-EFLM EuroMedLab-WorldLab Congress 2023 Rome Italy May 21 – 25
- h. As a member of the IFCC Speaker Bureau
- i. IFCC VPL Visitor Lecturer Programme,
- j. XXI International Congress of the National College of Bacteriology Medellin Colombia October 12 -15
 - 1.1. Speaker of the Intra-congress Workshop “Dengue Virus DENV associated liver dysfunction”
 - 1.2. Lecturer Conference Liver diseases in patients with clinical manifestation of Dengue
 - 1.3. Speaker at the Conversation “What we know about our Associations”. Information on IFCC structure and management areas
- k. Webinars Organized by IFCC. Participation in 7 (seven)

Activities in other International Societies

SANAC Andalusian Society of Clinical Analysis

Member of the Scientific Committee of the XXIX Congress of “The laboratory facing the challenges of Genetics.

Granada Spain 16 -28 March 2023

Member of the evaluation panel for the presentation of research work Oral modality

Attendance joint meeting with CD SANAC President-elect and acting IFCC

SBAC Brazilian Society of Clinical Analysis

Invited to the 48th CBAC Brazilian Congress of Clinical Analysis

Meeting with PNCQ directors

Meeting with the authorities of the CNBC (President and Treasurer) topic: Transfer of experiences and lessons learned as Past President of the COLABIOCLI Congress 2006 Asunción Paraguay. Taking into account that the CNBC is the entity that will organize the COLABIOCLI 2024 Congress Cartagena Colombia, the meetings continued within the framework of the Congress in Medellin

4. Report : Dra Graciela Russo

- AWARDS COMMITTEE MEMBER: Assigned by the IFCC Executive Board, from January 2018 to December 2023, for two periods. I participated as an award evaluator in the years 2020 and 2023.
- In 2021, the ABP nominated me and I was admitted on merit as a Member of the Committee MEMBER COMMITTEE “Committee on Clinical Molecular Biology Curriculum (C-CMBC)” of the IFCC, a committee that is part of the Education Division. The Chair or Coordinator of said Committee is Dr. Verena Haselmann (Chair, C-CMBC)
- The position was for a three-year term 2021-2023, as the first period. Member of the Committee on Clinical Molecular Biology Curriculum (C-CMBC), 2021–2023 appointed by the Education and Management Division of the IFCC for a first term of three years. The recommendation was done by the Paraguayan Society of Biochemistry and the approval was based on an evaluation of merits and aptitudes.





1. On August 26th, 2021 I received the first email, where Dr. Verena Haselmann, C-CMBC chair expressed that due to the COVID-19 Pandemic, the courses would not be developed.
2. In November 2021, I traveled to Europe for our first in-person meeting, set for November 30th in Munich due to EuroMedLab. It was suspended because of the Pandemic issue.
3. On March 29th, 2022 we received an email from Dr. Verena stating that we would have an in-person meeting in Seoul during the WorldLab Congress from June 26 to 30, 2022. On repeated occasions I asked her to confirm in order to purchase the ticket from South America "very expensive" and very late on may 4th she sent us an email with Seoul information about travel reimbursement, etc. It was expressed in the email "Please try to keep air fares as low as possible, e.g. not exceeding €1500, as otherwise it might not be possible that all of us are attending all courses". For this reason I gave up traveling, since the prices were above \$3,000. I applied to participate virtually during the committee meeting and never received a response.
4. Two courses were scheduled for 2022. One for "beginners" to be held on September 4th to 10th, 2022 and another "advanced" in November 30th to December 3rd, 2022; both of them in Turkey. I agreed to participate giving VIRTUAL lectures at the indicated time, in September. I was available to travel at the end of September but no at the first week, and it was known by the members. I had no problem in November for the Advance Course. However, I never found out why they did not tell me what part of the program I should develop, when and how my interventions would be. Also, I was never informed that they had a written protocol for both courses. I knew about it in October 2022.
5. On October 28th, 2022 we met in Brussels during the "IFCC General Conference", Dr Verena could not go, she did it virtually. I was told that I would not participate in the ADVANCED course in Turkey because "the organizers did not want any subject about infectious diseases".
6. On May 21st, 2023 we met in Rome during the "WorldLab - EuroMedLab 2023 Congress". We organized the advance course for Lithuania and the beginners course for Nigeria.
7. I participated in the Advanced course that was held in Vilnius-Lithuania from November 30th to December 3rd, 2023.
8. I was in charge of just one lecture of 2 hours because the program for this course was not organized in my area of expertise, however I had no problem to give another 2 hours lecture in "infectious disease molecular diagnostics" (not prepared with at least one day time) when it was requested by Dr. Verena because Dr Andrea Ferreira was not going to be able to give the virtual class.

ADDITIONAL INFORMATION

CERTIFICATION OF BIOCHEMICAL SPECIALTIES

The Ministry of Public Health and Social Welfare has issued Resolution S.G. No. 307 of July 12, 2022, WHICH ESTABLISHES THE REQUIREMENTS FOR THE REGISTRATION AND QUALIFICATION OF SPECIALIST TITLES OF HEALTH PROFESSIONALS.

The ABP together with the scientific societies: Paraguayan Society of Microbiology (SPM), Paraguayan Society of Laboratory Hematology (SPHL), Paraguayan Scientific Society of

Clinical Chemistry (SCPQC), are in charge of the certification and recertification of biochemical specialties, this resolution makes It is possible for fellow specialists to include their specialty in the biochemical register. For this purpose, 2 annual calls are made, one in April and the other in September.

From 2022 to 2023: 80 Specialists were certified



SAUDI ARABIA SAUDI SOCIETY FOR CLINICAL CHEMISTRY (SSCC)



NATIONAL MEETINGS

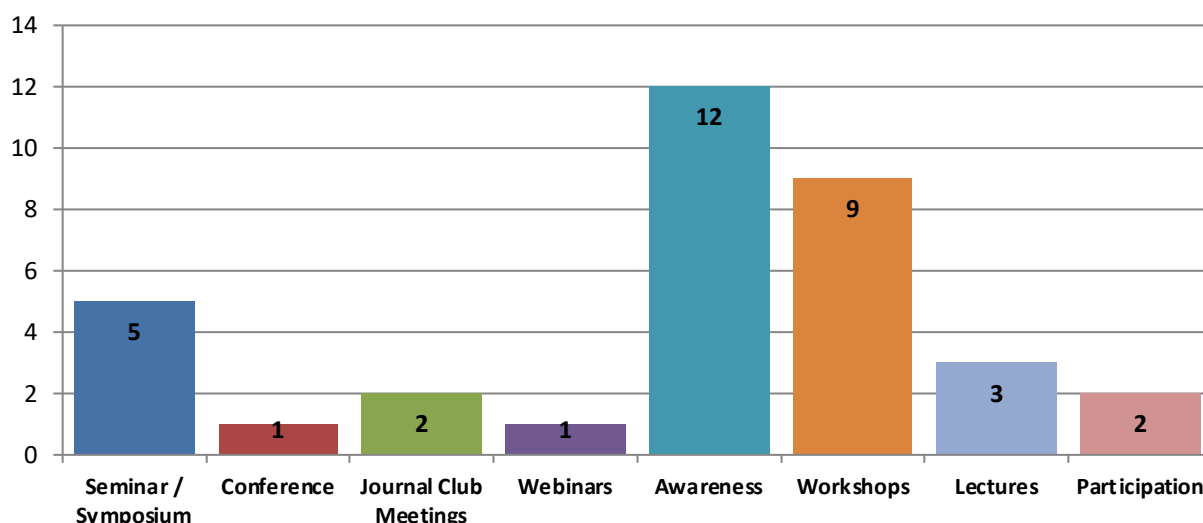
<i>Name of the meeting</i>	<i>Date</i>	<i>Topic</i>
All national meetings	14 th - 15 th October	Jan to Dec 2023

In 2023, the Saudi Society for Clinical Chemistry (SSCC) conducted scientific and social activities such as but not limited to seminars, symposia, workshops and awareness. The prime objective of the social activities was to assemble the like-minded intellectuals and healthcare professionals especially those in Clinical Chemistry fields to trade ideas and other related subsections, thoughts and views related to specific and specialized topics. Those helpful awareness meetings were used to educate, improve, and update the background knowledge of all participants.

Generally, it took a single or couple of days for each activity. A total of 35 social and scientific activities participated/conducted for the year 2023. Total CME claimed 72 CME.

Below is the list of scientific and social activities:

2023 Scientific and Social Activities





	ACTIVITY	PLACE	TYPE	DATE	CME
1	Low Carb. High performance	Jeddah	Booth Awareness	Jan16,17,18 2023	---
2	Future of clinical lab at Global Health Exhibition	Riyadh	Booth	Oct 30,2023	---
Seminar and Symposium					
	ACTIVITY	PLACE	TYPE	DATE	CME
1	International Seminar on Immunoassay	Dubai	Seminar	Feb 05,2023	5 CME
2	Methamphetamine: Its History, Chemistry, Addiction and Fatalities	Jeddah	Seminar	March 15,2023	4 CME
3	Saudi Society for clinical chemistry seminar Cooperate with the virtual medical Academy	Riyadh	Seminar	June 08,2023	
4	Saudi Society for clinical chemistry seminar on Serum Biomarkers of liver Cooperate with the virtual medical Academy	Dubai	Seminar	July 09,2023	
5	2 nd Low carb society seminar	Jeddah	seminar	Dec 4, 2023	7 CME
Journal Club					
	ACTIVITY	PLACE	TYPE	DATE	CME
1	1st Journal Club	Online	Journal Club	March 20,2023	2 CME
2	Harmonization of clinical laboratory tests	Online	Journal Club	Oct 16, 2023	2CME
Webinar					
	ACTIVITY	PLACE	TYPE	DATE	CME
1	Plasma Protein Science Day	Online	Lecture	Nov 09, 2023	2 CME



Workshop					
	ACTIVITY	PLACE	TYPE	DATE	CME
1	Vitamin and Hormone Assay Workshop	Al Khobar	Workshop	Jan 15,2023	2 CME
2	Vitamin and Hormone Assay Workshop	Almadina	Workshop	Jan 18,2023	2 CME
3	Vitamin and Hormone Assay Workshop	Taif	Workshop	Feb 27,2023	2 CME
4	Vitamin and Hormone Assay Workshop	Arar	Workshop	March 19,2023	2 CME
5	KPIs for Clinical Laboratory: How, What and Why to Measure	Riyadh	Workshop	May 18,2023	4 CME
6	Updates in Dyslipidemia Diagnosis and Management	Jeddah	Workshop	Sep, 16,2023	2 CME
7	Mass Spectrometry in Diagnosing Metabolic Diseases	Riyadh	Workshop	Sep, 28, 2023	2 CME
8	Innovation & Advancement in POC Blood Gas Testing	Riyadh	Workshop	Oct, 10,2023	4CME
9	Quality Control in the Medical Laboratory	Riyadh	Workshop	Nov, 29-30,2023	5 CME

Awareness					
	ACTIVITY	PLACE	TYPE	DATE	CME
1	An awareness lecture in conjunction with World Rare Disease Day (metabolic genetic diseases)	Online	Awareness	Feb 28,2022	----
2	Intermittent fasting and Ramadan fasting, the difference and benefits	Online	Awareness	March 27,2023	
3	The first issue of the awareness magazine of the Saudi Society for Clinical Chemistry		Awareness	March 2023	----
4	The effect of the microbiome and intermittent fasting on diabetes with the participation of the Saudi Society for Laboratory Medicine	Online	Awareness	April 05,2023	
5	Point-of-care devices and their uses	Online	Awareness	June 21,2023	----
6	The second issue of the awareness magazine of the Saudi Society for Clinical Chemistry		Awareness	June 29,2023	
7	low carb community organized with team mecca for hiking, Thor Mountain hike, and super blue moon gazing	Macca	Awareness	Aug 30,2023	
8	Blood draw and effects	Online	Awareness	Sep 25,2023	
9	The importance of pre-marital examinations	Online	Awareness	Sep 30,2023	
10	The third issue of the awareness magazine of the Saudi Society for Clinical Chemistry		Awareness	Sep 2023	

11	An awareness meeting entitled diabetes and lifestyle	Online	Awareness	Nov14,2023	
12	The fourth issue of the awareness magazine of the Saudi Society for Clinical Chemistry		Awareness	Dec 30,2023	

Lecture					
	ACTIVITY	PLACE	TYPE	DATE	CME
1	vitamin and Insulin assay	Jeddah	Lecture	Feb 26,2023	2 CME
2	Hormone and HIV Infection Assay	Jazan	Lecture	March 2,2023	3 CME
3	Overview of Metabolic Diseases	Jeddah	Lecture	March 8,2023	2 CME

Conference					
	ACTIVITY	PLACE	TYPE	DATE	CME
1	9th Annual Conference SSCC 2023 & 5th International Meeting on Clinical Chemistry and Laboratory Medicine	Jeddah	Lecture	Feb 26,2023	2 CME

5th International Meeting in Clinical Chemistry & Laboratory Medicine & 9th Annual Meeting Saudi Society for Clinical Chemistry, Saudi Arabia (5-7 Dec 2023):

Saudi Society for Clinical Chemistry held many activities during the year of 2023. Some activities were held online and others were held as hybrid. Activities were including workshops, webinars, conferences seminars, awareness and booth participation in different exhibitions. The main national meetings held by the SSCC in 2023 are summarized in the table below.

The 9th Annual conference was held as onsite meeting from 5th to 7th December 2023 in Jeddah. A pre conference workshop was held on 5th December 2023 covering the topics on Leadership and Management, toxicology and Low Carb Society Session and Clinical Chemistry Board Programs in Saudi Arabia.

The keynote speakers for the conference was Prof. Khosrow Adeli, president of the IFCC. Other international guest speakers were invited, Dr. Laila Abdel-wareth, Acting Executive Director National Reference Lab/Cleveland Clinic Abu Dhabi, UAE, Dr. Hady Elkhodary, American Hospital, Dubai, UAE, Dr. Ghassan Shannan, Damascus, Syria, and Dr. Nafila Alriyami, Sultan Qaboos University Hospital and other known national speakers.

The conference was accredited by Saudi Commission for Health Specialties for 19 CMEs with more than 500 delegates attended the meeting. The Scientific Program included 11 sessions with more than 35 speakers, 65 posters, and 40 presentations. The speakers were from international (Australia, Canada, UAE, Oman, Syria), regional and national.

This scientific program included sessions about cardiometabolic markers, biochemical genetics, and the need to know on inborn errors of metabolisms and its application in clinical practice. The sessions also covered the importance of laboratory quality on auto-validation and reference intervals.

The Industry Workshop sessions provided by the collaborators presented the topics on the



diagnosis of neonatal sepsis and monoclonal gammopathy, lab future technologies, and cardiac markers. The event was also attended by some special guests namely Prof. Abdulrazak Hiddilli, Arab Federation for Clinical Biology (AFCB) representative to IFCC; Dr. Manal Shabaan, Tunisian Society of Clinical Biology (STBC); and as well as the President of the Emirates Society Clinical Chemistry Dr Laila Abdel-wareth– UAE. The exhibition court included booths for different collaborators namely Roche, Siemens, Snibe, Abbott, QuidelOrtho, Binding Site, Siemens, Beckman, BD, and EMS. By the end of the meeting there was Poster Session Awards Announcement with more than 65 posters printed, and 5 prizes for best 5 posters.

EDUCATION

Research Supported by SSCC (2023):

The SSCC is supporting two scientific researches

- The Assessment of V-PRO Blood Collection Tubes in Comparison to BD Vacutainers for the Main Laboratory Tests of Chemistry and Hematology
- Accurate determination of Biotinidase activity in serum by HPLC and its utilization as second tier test for the confirmation of initial positive newborn screening results.

Magazines – Awareness (Jan – Dec 2023):

- The first issue of the awareness magazine of the Saudi Society for Clinical Chemistry
- The second issue of the awareness magazine of the Saudi Society for Clinical Chemistry
- The third issue of the awareness magazine of the Saudi Society for Clinical Chemistry
- The fourth issue of the awareness magazine of the Saudi Society for Clinical Chemistry

INTERNATIONAL RELATIONS

SSCC is going to host the WorldLab 2024 in Dubai between 26-30 May. Therefore, the SSCC held different meetings together with conference organizing committee (COC) and the scientific committee (SC) as well. All preparations almost complete and the scientific program as well. Visit the following link for more details: <https://dubai2024.org/>



SSCC group gathering.



Prof. Abdelrazek Hedhili, Representative of (AFCE) to the IFCC



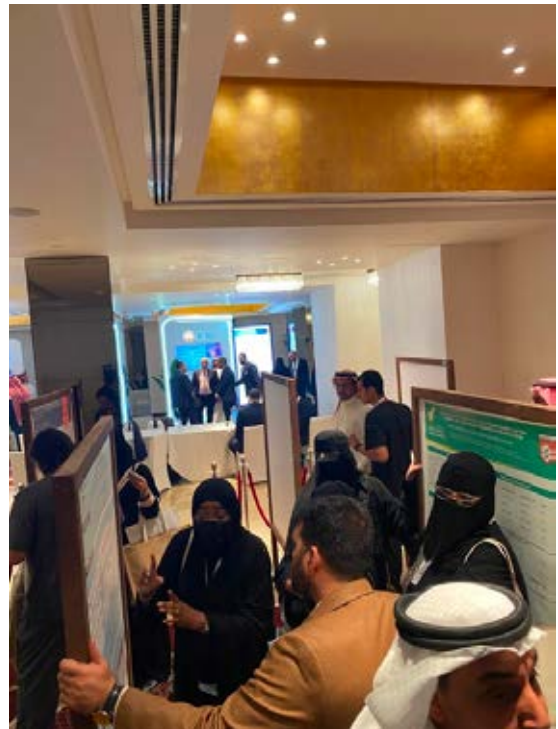
Prof. Peter Brukner Australia (guest speaker).



Reference Intervals session discussion: Middle, Prof. Gassan Shannan (Guest speaker), Syria; Right: Dr Hadi Khodari (United Arab Emirates), left, Dr Anwar Borai (Saudi Arabia).



Exhibition Hall



Poster Session Hall



SOUTH AFRICA

SOUTH AFRICAN ASSOCIATION FOR CLINICAL BIOCHEMISTRY & LABORATORY MEDICINE (SAACB)

NATIONAL MEETINGS

<i>Name of the meeting</i>	<i>Date</i>	<i>Topic</i>
Stellenbosch Laboratory Management module	25 March 2023 (Cape Town)	General laboratory management (various SAACB members)
Medlab Africa	17-19 October 2023 (Johannesburg)	General laboratory medicine
Pathred congress	1-3 September 2023 (Johannesburg)	General laboratory medicine
International Society of Human Genetics	22-24 Jan 2023 (Cape Town)	Structural biology presentations
UKMedlab23	12-14 June 2023 (Leeds)	Conference presentations

EDUCATION

The following educational webinars were held:

17 Jan 2023: Dr M. Korf: Confusion to Clarity. Work-up of a 19-year-old female who presented with generalized weakness.

31 Jan 2023: Dr. B. Grove This talk describes how to distinguish between salt poisoning and hypernatraemic dehydration in paediatric patients.

14 Feb 2023: Dr J. Grove: This presentation will include a series of interesting cases discovered during registrar training, with a focus on specialized chemistry testing.

20 Feb 2023: Dr V. Gounden: This talk will look at the diagnosis of conditions (utilizing chemical pathology in a modern context) based on a collection of famous historical case presentations.

7 Mar 2023: Dr O. Wiese: This series of cases will demonstrate and discuss how various registration and pre-analytical errors may affect patient result, cost of lab investigation and reporting.

14 Mar 2023: Dr N. Moodley: Markers of Liver fibrosis.

28 March 2023: Prof A. Zemlin: Clinical decision limits in evidence-based guidelines-what we need to consider.

18 Apr 2023: Dr J. Rusch: Some pathophysiology, and the role of the clinical laboratory in screening, diagnosis, monitoring, and management of diabetes.

23 May 2023: Dr K. Moremi: Nucleic acids.

25 Apr 2023: Dr U. Ngxamngxa: This session will cover screening and diagnostic tests covered by prenatal testing.

02 May: Dr KTR. Magolego: This session gives details to our recent experience with a bilateral inferior petrosal sinus sampling procedure. This is a rare procedure that has multiple pitfalls and requires a multidisciplinary approach to ensure success.

09 May 2023: Dr M. Sathekge: An approach to a young patient with suspected inborn errors of metabolism.

16 May 2023: Dr D. Jacob: Review of antibody testing relevant to the investigation of endocrine disease.



23 May 2023: Dr Moremi: This session will provide an understanding of the flow of genetic information between DNA, RNA and Proteins, as well as the potential flaws that lead to clinical consequences.

30 May 2023: Dr Mujuru: This will be a presentation on rejection rates at the NHLS over a 3-5 years and their effect on downstream applications such as patient management, laboratory TAT, and research.

6 Jun 2023: Dr R. Banderker: Review of copper metabolism with discussion of both inherited and acquired disorders.

20 Jun 2023: Dr TP Jalavu: The pathophysiology, clinical presentation, diagnosis and complications of acromegaly will be discussed.

25 Jul 2023: Dr T. Pillay: An overview of the practical and regulatory requirements regarding reporting of critical laboratory results.

05 Sept 2023: Dr A. Zama: This session will look at the physiology of renal handling of protein, describe primary renal pathology as well as effects of systemic disease on the nephron.

REGIONAL MEETINGS

<i>Name of the meeting</i>	<i>Date</i>	<i>Society's contribution for the meeting</i>
International Year of Basic Sciences for Sustainable Development (IYBSSD 2023) Southern African	15 Mar 2023 (Pretoria)	Member of the South African Basic Sciences platform
Association of Clinical Biochemists of India (ACBICON)	13-16 September 2023 (Kerala)	Presentation on cardiovascular markers
Pakistan Association of Chemical Pathologists	16-18 November 2023 (Lahore)	Plenary on LDL cholesterol
African Society of Lab Medicine	12-15 Dec 2023 (Cape Town)	Plenary on noncommunicable diseases

REGIONAL RELATIONS

Discussions with the Southern African Laboratory Medicine Association (SALMA) regarding joint meetings and conferences. SALMA is a new regional association devoted to the promotion of laboratory medicine in the Southern African region.

INTERNATIONAL RELATIONS

The SAACB is also a member of WASPALM (World Association of Societies of Pathology and Laboratory Medicine) and participated in the WASPALM congress in Brazil in 2023.

SAACB WASPALM symposium 9 September 2023, Sao Paolo.

Advances in the assessment of cardiovascular risk (90 min)

Chair: Prof Tahir Pillay

Speaker 1. Prof Tahir Pillay (Pretoria, South Africa) : Evaluation of LDL-C cholesterol in the new era

Speaker 2. Prof Anil Chuturgoon (Durban, South Africa): Markers for coronary heart disease: old and new

Speaker 3. Prof Rajiv Erasmus (Cape Town, South Africa): Point-of-care tests and the assessment of cardiovascular risk

SAACB members also participated as champions in Global Medlab Week held in 2023.

The SAACB also participated in the American Association of Clinical Chemistry annual meeting in Anaheim in July 2023.

ADDITIONAL INFORMATION

The SAACB is the daughter society of the Federation of South African Societies of Pathology (FSASP) and holds its annual meetings including its AGM during the FSASP conference. The last FSASP conference was held in 2018 at Spier Wine Estate in Stellenbosch, Western Cape. Owing partly to the Covid pandemic, there have been no conferences since then but a joint one with the FSASP and National Health Laboratory Service (NHLS) was held in September 2023. The SAACB initiated a series of Expert Webinars to circumvent the lack of face-to-face meetings. SAACB members also participated in a number of National Health Laboratory ECHO seminars held via Zoom throughout the year. These are listed in the education section.



SWITZERLAND

SCHWEIZERISCHE GESELLSCHAFT FÜR KLINISCHE CHEMIE
SOCIÉTÉ SUISSE DE CHIMIE CLINIQUE
SOCIETÀ SVIZZERA DI CHIMICA

NATIONAL MEETINGS

<i>Name of the meeting</i>	<i>Date</i>	<i>Topic</i>
Brains On	January 23, 2023	laboratory diagnostics of thyroid disorders, validation and verification of analytical methods – anything new?
Molecular Diagnostics 2023, Zurich	March 02 + 03, 2023	Primary Immunodeficiencies: From Newborn Screening to Treatment, Genetics of Kidney Disease, Polygenic Risk Scores, The Gut Microbiome Contributes to the Protective Farm Effect on Childhood Asthma, Outbreak Investigation of Community Associated Methicillin-Resistant Staphylococcus Aureus, Respiratory Viral Infections in Children: From Diagnosis to Immunisation, From Gene Diagnostics to Gene Therapy: A Personal Account of the Last 30 Years, Personalized Medication for Cystic Fibrosis, Genetics of Hemostatic Disorders, Home-Brew Assays and the New In Vitro Diagnostic Regulation (SGMG), How Good is your Next Generation Sequencing? Lessons Learned from Genomics EQA Schemes, Genome-Wide Arrayed CRISPR: A Novel Approach to the Study of Human Diseases
SSCC Annual Assembly 2023, Crans Montana	October 04 – 06, 2023	Drug treatments for obesity: an update, Circadian timing of glucose metabolism, Ketogenic diet therapies against epilepsy, Cancer-induced muscle atrophy, Drug and driving ability: what markers should be used for acute and chronic use?, Clinical toxicology: working for emergency departments, Toxicology of trace elements: from exposure to intoxication, Clinical toxicology: pitfalls & guidelines, Evaluating the influence of environmental and lifestyle factors on semen quality, Emerging technologies: opportunities for the infertility workup, Hormonal aspects of early puberty and endocrine disruptors, Lab tests for medically-assisted procreation, The Swiss IVD sector 2023: survey report, Steroidomics and doping, Epigenetic modifications and health conditions: the example of chronic pain, Biomarkers of cardiac remodeling: evolution during ultra-endurance races, The usefulness of geolocalization for studying gene-environment interactions and non-communicable diseases: the example of anti-apolipoprotein A-1 autoantibodies

EDUCATION

26 days of further education as a CAS in laboratory medicine, which is part of the further education curriculum in laboratory medicine in Switzerland. This CAS is offered in German at the University of Zurich (<https://www.cas-labmed.uzh.ch/de.html>) and in French at the University of Geneva (<https://www.unige.ch/formcont/cours/cas-medecine-laboratoire>).

<i>Name of the meeting</i>	<i>Date</i>	<i>Society's contribution for the meeting</i>
WORLDLAB-EUROMEDLAB ROMA 2023, SATELLITE MEETING, CLINICAL MASS SPECTROMETRY: VALIDATION AND ACCREDITATION OF IVD AND LABORATORY DEVELOPED TEST (LDT) IN THE NEW "REGULATION EU 2017/746" ERA	May 20-21, 2023	Co-organisation with the SIBioC



SYRIAN ARAB REPUBLIC SYRIAN CLINICAL LABORATORY ASSOCIATION (SCLA)

Scientific Activities of the Syrian Clinical Laboratory Association (2023)

- The Syrian Clinical Laboratory Association had actively participated in the following activities.
- The officers addressed several topics during the following scientific activities.
- The topics included, Newborn Screening, Vitamin D, Reference Intervals, Microalbumin and other topics.

Pharmacist Syndicate, Aleppo	Dr. Ghassan Shannan	February 2023
Vitamin D (SNIBE)	Dr. Ghassan Shannan Dr. Alia Al Assad Dr. Rabea Nahas Dr. Fiaza Qubeily	February 2023
WorldLab, Rome	Dr. Adnan Al khatib	May 2023
Endocrinology Society	Dr. Adnan Al khatib	June 2023
NutriBaby, Children Hospital	Dr. Adnan Al khatib	June 2023
Farrah Symposium, Kidney Diseases	Dr. Adnan Al khatib	June 2023
Newborn Screen (SNIBE)	Dr. Adnan Al khatib	June 2023
Physician Syndicate Conference	Dr. Adnan Al khatib	September 2023
Saudi Society Conference	Dr. Ghassan Shannan	November 2023



NATIONAL MEETINGS

<i>Name of the meeting</i>	<i>Date</i>	<i>Topic</i>
36 th National Days of Clinical Biology	4, 5 & 6 May, 2023	Clinical Biology
3 rd Tunisian Days of Practical Biology	26 & 27 October, 2023	Biology and Pediatrics

<i>Date</i>	<i>Place</i>	<i>Theme</i>	<i>Attendance</i>
October 6, 2023	Tunis	Venous Thromboembolic Disease in Pregnancy and Postpartum	76
October 10, 2023	Tunis	STBC YS TF Clinical cases	50
October 24 & 25, 2023	Sousse	XIV th course in molecular biology: "Genotypic Detection of Treatment Resistance in Microorganisms, Model: Hepatitis C and AADs"	16
December 8, 2023	Sousse	HIV Infection: Updates in 2023	24
January 5, 2024	Tunis	Diagnostic and Prognostic Biomarkers of Cardiovascular Emergencies	46
January 26, 2024	Tunis	Challenges in Interpreting theirregular agglutinins test	57
February 4, 2024	Kébili	6 th Kébili Day of Clinical Biology	100

<i>Name of the meeting</i>	<i>Date</i>	<i>Society's contribution for the meeting</i>
1 st Moroccan-Tunisian meeting: "Clinical-Biological Dialogue"	June 6, 2023	STBC AMBM
1 st Tunisian-Algerian Days of the Medical Biologist: "Biological Diagnosis of Respiratory Infections"	November 25, 2023	STBC AMBM SALAM

REGIONAL RELATIONS

Partnership with Tunisian Union of Private Biologists -STBP (Tunisia)

INTERNATIONAL RELATIONS

Partnership with Algerian Union of Medical Analysis Laboratories - SALAM (Algeria)
Partnership with Moroccan Association of Medical Biology - AMBM (Morocco)
Partnership with The Moroccan Society of Clinical Chemistry - SMCC (Morocco)
Partnership with Union of Biologists in Lebanon (Lebanon)

Partnership with Palestinian Medical Technology Association -PMTA (Palestine)
 Partnership with Les Biologistes Médicaux (France)
 Partnership with The French Society of Clinical Biology- SFBC (France)
 Partnership with Biologists' Union - SDBIO (France)
 Partnership with The Greek Society of Clinical Chemistry-Clinical Biochemistry
 GSCC-CB (Greece)



TURKIYE TURKISH BIOCHEMICAL SOCIETY (TBS)

NATIONAL MEETINGS

<i>Name of the meeting</i>	<i>Date</i>	<i>Topic</i>
Symposium of Autoverification Systems in Laboratory Medicine_ Vişnelik _Ankara	May 14, 2023	Autoverification Systems In Türkiye From Past To Present Artificial Intelligence, Machine Learning and Autoverification system in laboratory Çam Sakura City Hospital Autoverification System Experience - Cobas Infinity (Roche) The future of laboratory information technologies Overview and Goals of Laboratory Information Systems Improving the post-analytical phase with algorithm-based AV Application examples in LIS based on (VENTURA-ALIS) autoverification systems Future of Health in Türkiye
Preanalytical Symposium _ Vişnelik _Ankara	June 2, 2023	"Life Of A Blood Tube" Precious Specimens Management of Preanalytical Phase -I Management of Preanalytical Phase -II



<p>International TBS Congress</p> <p>34th National Biochemistry Congress , 2023, Fethiye _Turkiye</p>	<p>Oct 29- Nov 1, 2023</p>	<p>Oct 29- Nov 1, 2023</p> <p>Opening lecture:</p> <p>The Critical Role of Intracellular Molecular Architecture in Programming Metabolic Function</p> <p>Session Titles:</p> <ul style="list-style-type: none">- Biological Clock and Chronobiology Panel- A New Therapeutic Approach to Pan-Cancer Treatment: Direct Telomere Targeting Molecules and Immune Check Point Inhibitors- Updated Training Recommendations by the IFCC Cardiac Biomarkers Committee on Clinical Applications of Cardiac Biomarkers- Updates to Clinical and Medical Laboratory Guidelines and International Standards- Integrative Approaches to Molecular Interactions and Drug Design- Digital Transformation in Clinical Laboratory: Reliable Sample Tracking, Effective Data Analysis, Fast Results and Clinical Benefits- Skin Barrier Ceramide Metabolism in Health and Disease- NMR in the Clinical Laboratory: Lipoprotein Profile Analysis- Where Are We Going in Diagnosis, Monitoring and Treatment? Current Situation and Near Future- Clinical Decision Making Tools in Changing Healthcare. <p>Key notes:</p> <ul style="list-style-type: none">- The Future of Laboratory Medicine: Integrated Diagnostic Approach- Implementing Sustainable Approaches in Medical Laboratories: Transforming Clinical Laboratories into Green Laboratories- Current Developments in the Clinical Use of Tumor Biomarkers: Usefulness, Challenges, and Perspectives- Harmonization of Post-analytical Phase- My Research Journey in the World of Sphingolipids and Sphingolipidosis- Secrets and Mysteries of the Preanalytical Phase <p>Satellite Symposiums:</p> <ul style="list-style-type: none">- Standardization and Harmonization in Immunoassays: Quality and Comparability are Needed- Evaluation of Primary Hemostasis in Patients with Bleeding Diathesis- Digital Transformation in Clinical Laboratory: Reliable Sample Tracking, Effective Data Analysis, Fast Results and Clinical Benefits
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8 th Turkey In Vitro Diagnostic (IVD) Symposium_ Izmir Branch of TBS_ İzmir	Oct 29, Dec1, 2023	<p>“Preclinical Modelling”</p> <ul style="list-style-type: none">- Bioanalytical Techniques in Preclinical Research-I- Bioanalytical Techniques in Preclinical Research-II- Cell Culture in Preclinical Research- I- Cell Culture in Preclinical Research-II- Experimental Animal Models- Computational Approaches to Preclinical Studies- Imaging in Preclinical Studies- Disease-Specific Models in vivo/in vitro Analysis Examples-I- Are Translational Centers Important for Drug Discovery?
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EDUCATION

- Applied Course on Flow Cytometry Use in Acute Myeloid Leukemias
14-15 January 2023, Ankara

Klara Dalva
Fatma Meriç Yılmaz
Oğuzhan Zengi
Çiğdem Sönmez
Nurgül Özcan
Habib Özdemir
Bağnu Orhan
Ali Ayçiçek
Gülşah Kaygusuz
Haktan Bağış Erdem
Nuran Ahu Baysal

- Course of Reference ranges: From theory to practice
5 May 2023, Istanbul

Abdurrahman COŞKUN
Yeşim ÖZARDA

- Course on the Use of Machine Learning for Data Processing in Laboratory Medicine,
29 October 2023, Fethiye

Sedef YENİCE
Deniz İlhan TOPÇU
Hikmet Can ÇUBUKÇU

- Drug Analysis from Theory to Practice and Laboratory Tests Used in Alcohol Addiction
Course (Practical course)
29 October – 1 November 2023, Fethiye

Mehmet ŞENEŞ
Ayla YILDIZ
Sedat ABUŞOĞLU



- Computer Applied Basic Statistics Course for Beginners,
29 October 2023, Fethiye

Doğan YUCEL
Muhittin SERDAR
Murat Cihan
Hamit Hakan Alp
Serkan Bolat
Hikmet Can Çubukçu
Kâmil Taha Uçar

- Electrophoresis and Clinical Laboratory Course in Monoclonal Gammopathies,
29 October 2023, Fethiye

Nilgün TEKKEŞİN
Özgür AYDIN

REGIONAL MEETINGS

<i>Name of the meeting</i>	<i>Date</i>	<i>Society's contribution for the meeting</i>
2 nd Nutrition and Metabolism Symposium , ISTANBUL	Dec 15-16, 2023	Istanbul Branch of TBS Session Titles: - The effect of obesity on the cardiovascular system and early mortality after coronary bypass surgery. - Anti-inflammatory nutrition and its importance - Epigenetic control of metabolism and epigenetic effects of nutrition - How should we eat for our brain health?-Use of amino acids and micronutrients- - Microbiota metabolite; short chain fatty acids - The relationship between food additives and cancer - A look at cancer treatment and polyphenols - Omega-6 dominant dietary fats, arachidonic acid and inflammation: What do we "know"?

REGIONAL RELATIONS

Sep, 2023:

Status Report and Recommendations on the Use of Artificial Intelligence Tools in Education
TBS Academia Group (Ferhan G. Sağın, Ali Burak Özkaya, Funda Tengiz, Öykü Gönül Geyik, Caner Geyik)

INTERNATIONAL RELATIONS

International Meetings:

May 20, 2023: Meeting of EFLM Task Force On Chronic Kidney Disease
Oytun Portakal, Assoc. Prof. Board Member of TBS

May 19-22, 2023: IFCC EMD EC Meeting
Sedef Yenice, Prof. Executive Member , Representative of TBS

May 20- 21, 2023: Meeting of EFLM CPD Executive Committee
Deniz İlhan Topçu, Assoc. Prof. Representative of TBS

May 22, 2023: IFCC Internet and Digital Communication (CIDC) Meeting
ikmen, Prof. Representative of TBS

Jan to Dec, 2023, Montly: Meeting of IFCC Task Force on Outcome Studies in Laboratory
Medicine (TF-OSLM) Committee
Muhittin Serdar, Prof. Board Member of TBS

Dec 1-2, 2023: EFLM Executive Board Meeting
Sedef Yenice, Prof. Chair of TF-CECS, Representative of TBS

New Representatives of IFCC and EFLM:

Feb 17, 2023

Abdurrahman Coşkun, Prof. Dr. has been appointed as the chairman of the newly established Task Group "Practical Guide to Implementation Measurement Uncertainty in Laboratory Medicine" (TG-PGIMU) by EFLM.

Feb 17, 2023:

Fatma Demet Aslan, Assoc. Prof. has been elected as a full member of the IFCC Reference Interval And Decision Limits (IFCC-C-RIDL).

April, 2023:

Deniz İlhan Topçu, Assoc. Prof. was appointed as the chairman of the IFCC Committee on Internet and Digital Communication (C-IDC).

Nov 21, 2023

IFCC young scientist task force member Dr. Kamil Taha Uçar prepared a survey on "Critical Value Notification" together with his two friends.

2023:

Deniz İlhan Topçu Assoc. Prof. was appointed as a "consultant" in the EFLM Biological Variation Working Group.

2023:

Murat Cihan, Assoc. Prof. was elected as a full member of the EFLM Ethics Working Group. WG-E.

2023:

Medine Alpdemir, Assoc. Prof. was elected as a member of the EFLM Task and Finish Group: Biomarkers of Diagnosis and Follow-up of Nitrous Oxide Abuse (TFG-BNOA).

Dr. Tomris Özben's presidency of EFLM was completed at the end of 2023.

ADDITIONAL INFORMATION

Scientific support was provided to the studies of Ministry of Health And Social Security Institution.

Scientific support was provided for the studies of The Turkish Medical Association (TMA) and TMA- Coordination Committee of Medical Specialty Societies.

Additionally, the Turkish Journal of Biochemistry (TJB), the official journal of TBS which is indexed in SCI-E since 2007, has increased its impact factor by 45% from 0.481 to 0.7 in 2023



UNITED KINGDOM ASSOCIATION FOR LABORATORY MEDICINE (FORMERLY ACB)



<i>Name of the meeting</i>	<i>Date</i>	<i>Topic</i>
UKMedLab23	12-14 June 2023	Annual conference
ACB Residential Training Course	17.7.23	Supports the needs of those preparing to take their FRCPATH examination
Laboratory Medicine Leadership Summit	28.9.23	Hot topics in leadership
ACB Trainees Day	9.11.23	Statistical tools and guidance on statistical analysis
National Audit Day	10.11.23	Talks focused on troponin and acute chest pain, monoclonal gammopathy and myeloma

EDUCATION

Federation of Clinical Scientists Training Sessions for Trade Union representative

- **Flexible Working 14.11.23**
- **Management of change and sickness absence 17.10.23**
- **Supporting Members & working through cases 21.9.23**
- **The Role of a Rep 30.5.23**

Genome Sequencing

Clinical Interpretation and Implementation of Microbiological Sequencing Techniques course - Nov 20-24

Clinical Interpretation and Implementation of Microbiological Sequencing Techniques course - Sept 25-29

Clinical Interpretation and Implementation of Microbiological Sequencing Techniques course - June 26-30

Whole Genome Sequencing and Infection Course 17.4.23

REGIONAL RELATIONS

Last year 1,273 of our members were signed up to the EFLM Academy via our block enrolment and many have taken advantage of the resources and bursaries opportunities this includes.

We now promote EFLM Webinars available to Academy members via our Event Calendar

There were 7 application submitted for members to join EFLM committees - 1 successful applicant (Philip Monaghan becoming Chair of the EFLM Working Group: Test Evaluation).

We have at least 34 members on at least one IFCC or EFLM Committee/Working Group

ACB Director of Scientific Affairs Alexandra Yates convened a Task and Finish Group on Validation and Verification that invited European members including Anders Kallner (Associate Professor at Karolinska University hospital, Stockholm). The end result will be a new collection of very valuable resources for members

ACB Green Champion Group have promoted and sign-posted EFLMs Green Labs toolkits

INTERNATIONAL RELATIONS

ACB President Katharine Hayden was an invited speaker at the ADLM Annual Scientific Conference in Anaheim presenting on 'Appropriate test utilization driving sustainability', July 24 2023

A meeting was also held with ADLM senior officers to discuss areas of mutual interest.



VIETNAM VIETNAMESE ASSOCIATION OF CLINICAL BIOCHEMISTS (VACB)

NATIONAL MEETINGS

Name of the meeting	Date	Topic
Scientific Conference of the Central Vietnam Society of Clinical Biochemists	14-15 June 2023, Hue	Clinical Chemistry, Immunology, Endocrinology, Diabetes, Quality Assurance, Laboratory management
Congress and Scientific Conference of the South Vietnam Society of Clinical Biochemistry	20-21 July 2023, HoChiMinh-City	Clinical Chemistry, Immunology, Diabetes, Quality Assurance and Quality Control, Oncology, Pediatrics Chemistry
25 th Scientific Conference of the VACB. Jubilee of the 60th Anniversary of the foundation of the VACB We welcome the presence of IFCC President Khosrow Adeli in the Jubilee, his interesting participation and presentations.	18-19 August 2023, Hanoi	Clinical Chemistry, Molecular Biology, Oncology, Gastroenterology, Cardiology, POCT, Immunology, QA & QC.
26 th Scientific Conference of the Hanoi and Northern provinces of Vietnam	17-18 November 2023, Ninh Binh	Clinical Chemistry, Quality Assurance, Laboratory Management, Molecular Biology, Oncology, POCT, Immunology, Diabetes, Endocrinology, Cardiology

EDUCATION

- 1/ Participation of the VACB members in various IFCC Webinars in 2023.
- 2/ Organisation in cooperation with Roche, Siemens, Minh Tam, Abbott of 6 online and in site courses for members in Nord, Centre and South Vietnam.



INTERNATIONAL RELATIONS

Frequent and good International relations with IFCC, APFCB. Some countries : Korea, Japan, USA.



Affiliate Members Societies



FRANCE

FRENCH NATIONAL NETWORK OF ACCREDITED LABORATORIES OF MEDICAL BIOLOGY (LABAC)

LABAC: National scientific network of accredited laboratories (Association law 1901)

INTRODUCTION

Created in 2000, the Labac association aims to carry out any action aimed at:

- to enable exchanges of experiences and good practices related to quality assurance;
- to be a force of proposal and a privileged interlocutor for the French Accreditation Committee (COFRAC), scientific societies, professional unions and ordinal organizations;
- to promote quality in the evolution of Medical Biology and lab medicine

LABAC EXECUTIVE BOARD

- **Président:** Jean-Marc GIANNOLI
- **Vice-President:** Mickael PARIS
- **Vice-President:** Ivan MONNERET
- **Vice-Président:** Florian SCHERRER
- **Treasurer:** Brigitte SAVIE
- **Secrétaire:** Elisabeth GUIBOURGE
- **Board of trustees:** Jean-Michel VIALLE, Luc ESSEMILAIRE, Laurent SOUJED, Jacques de GRAEVE, Claude BOSI, Jean-Louis GALINIER, Nathalie COLARD, Julien L'HIRONDEL, Thierry AVELLAN, HENRI PORTUGAL

REGIONAL RELATIONS

LABAC is Affiliate Member of the European Federation of Laboratory Medicine

Jean Marc Giannoli and Jean Pierre Bouilloux are members of the ISO Technical Committee 212 (ISO/TC 212), Clinical laboratory testing and in vitro diagnostic test systems. ISO/TC 212 is responsible for international standardization and guidance in the field of laboratory medicine and in vitro diagnostic test systems.

IFCC Representative: Bernard GOUGET

Task Force on Global Lab Quality: Jean Marc GIANNOLI

Task Force on Laboratory Medicine Practice Guidelines: Julien L'HIRONDEL

Task Force on History: Bernard GOUGET, chair

Emerging Technology Division: Bernard GOUGET, ETD-EC secretary

NATIONAL MEETINGS

During French national meetings, it is traditional to invite or meet on IFCC events personalities such as Pr Nader RIFAI in Rome and Pr Tony BADRICK at EuroMedLab Rome 2023 or at ACBICON 2023 (Thiruvananthapuram Kerala, India). Pr Tomris OZBEN, IFCC, Dr Alexander HALIASSOS, IFCC Treasurer and Pr Tomas ZIMA, EFLM president Elect were invited by LABAC at the JIB 2023. These informal meetings allow to discuss on the evolution of the IFCC and to improve the work of LABAC in symbiosis with the IFCC strategy.



46th National LABAC Conference on Immuno-hematology, Paris (May 16, 2023)

1. Prescription in Immunohematology - Dr. Eric Mourey
2. Limits of methods in Immunohematology - Dr. Elodie Maenulein (EFS IDF)
3. Opinions and interpretations - Dr. Aurélie Conte (EFS OPM)
4. Sampling methods in Immunohematology - Dr. Guillaume Letizia (CH Dunkirk)
5. Difficulties in erythrocyte phenotyping and positive RAI - Dr. Elodie Maenulein (EFS IDF)
6. Management of identity errors - ERA Integration -Dr Sandrine Leyerloup
7. Timelines and methods for reporting erythrocyte phenotype and RAI determinations
Dr. Guillaume Letizia (CH Dunkerque)
8. Detection of rare Rh phenotypes - Dr. Patrick Joubaud (EFS BFS)
9. Clinical information to request - Dr. Bénédicte Debiol (EFS),
Dr. Corinne Chabières (EFS)
10. Report format and blood group card – Dr Sandrine Leyerloup (EFS headquarters)

47th National LABAC Conference (Paris, October 10, 2023: Spermiology and Reproductive Biology

1. Ensuring the performance of a CIQ / EEQ method - Dr. Carole Teston
2. Diagnostic spermiology Choosing and demonstrating the effectiveness of a method
Dr. Jérôme Pfeffer
3. Place of sperm cultures in spermiology... and in andrology! - Dr. Geoffroy ROBIN
4. Spermology and Medical Service Rendered: Case species - Jean-Michel Vialle
5. Details and methods for reporting Spermograms according to different indications
and results – Dr Pierre Sanguinet
6. Diagnostic spermology Concentration - Mobility - Dr. Frédéric Lecompte
7. Accreditation of LBM in reproductive biology – Dr Nicolas Rondineau
8. Spermiology - Preanalytical phase -Dr Véronique Lemarquis
9. Diagnostic spermology Good practice documents - Prof. Florence Boitrelle
10. Qualification of reagents, consumables, and equipment in spermology
Dr. Leila Khettar
11. Genesis of the NF EN ISO 23162: 2021 standard Role of LABAC
Dr Jean-Pierre Bouilloux

48th Labac National Conference (December 20, 2023)/ - RELAB network for epidemiological surveillance-Review of the ISO 15189 2022 standard, IFCC congress, news and activities report of Labac in 2023

1. RELAB, the first epidemiological surveillance network - Prof. B. Lina and V. Enouf
2. Transition to the 2022 version of the ISO 15189 standard - H. Mehay
3. Review of CELME 2023 - JM. Giannoli Review of Wordlab Roma - international
scientific news - M. Fortun
4. Presentation of EQALM - S. Albarede
5. Business continuity plan - A. Leriche
6. Post-follow-up - sector - bench - P. Frache
7. The new PTH index - M. Bernier
8. Demystifying Calprotectin in 15 minutes - S. Samaan
9. BIORECOS presentation of the tool – B. Carrara

10. Presentation of the Labac Guideline pipettes - JP. Bouilloux
11. Publication of the 2024 Recommendations in immuno-hematology
P. Joubaud and G. Letizia
12. Presentation of the new Labac.eu website - A. Heim

CONGRESS IN PARTNERSHIP

JIB 2023, Palais des congrès de Paris Novembre 17-18

Several speakers from all over the world attended the JIB congress in Paris in November and gave oral presentations and took active parts to Educational Workshops. Several speakers from all over the world attended the meeting in Paris in November. They gave oral presentations and took active parts to Educational Workshops.

Session organized by LABAC

NF ISO 15189 2022: for better medical service and risk analysis: JM GIANNOLI, A VASSAULT

The whys and Hows of direct-to-consumer testing (DTCT) T ZIMA, T OZBEN, M ORTH, M VAUBOURDOLLE, JM GIANOLI, B GOUGET

Analytical performance specification: from modeling to practices T ZIMA, JM GIANNOLI, E THEODORSON

EDUCATIONAL MODULES AND WEBINARS

LABAC maintains memoranda of understanding with several societies for the purposes of mutually beneficial education exchanges.

LABAC is developing its “Meet the experts” with a new model: remotely, free for all members, over 2 or even 3 one-hour sessions, limited to 20 people for a real pooling of ideas around from an expert in the field.

LABAC is coordinating the French translation of the ADLM Adaptive online learning. Among the first translated modules: Biological and pre-analytical variability, thyroid, Hematology, statistics, automation, formulas and control of calculations, diabetes, etc.

An important LABAC project has been the management of the **French version of labtestonline (www.labtestonline.it)** which is an essential communication tool with the public.

All the Presentations delivered during the national meeting are in free access for the LABAC membership.

LABAC is supporting its membership to attend IFCC events or congresses with IFCC auspices and has established a bursary program to encourage participation of young scientists at the IFCC events or congresses with IFCC auspices/

- Labquality Days 2023 is one of the largest annual international congresses in Scandinavia focusing on quality in laboratory medicine and health technology.

ROMA 2023. WORLDLAB EUROMEDLAB. 21-25 May 2023

- ADLM Anaheim 2023, July 23-27
- 5th Symposium Cutting Edge of Laboratory Medicine in Europe CELME 2023, Prague, Czech Republic, October 12 – 13, 2023.

WEBSITE

A new website has been recently launched (<https://www.labac.eu/>) to make it more attractive, more open to all, more modern and consistent with the on line retransmission of conferences for subscribers, and the different sections on the Labac activities



PUBLICATIONS

Managing the Quality Control of multiple instruments, Tony Badrick* and Jean-Marc Giannoli, Clin Chem Lab Med 2024; 62(3): e62–e64 ; <https://doi.org/10.1515/cclm-2023-0592>; Received June 6, 2023; accepted August 16, 2023; published online August 28, 2023

Editorial: Nader Rifai. Démocratisation de l'enseignement : les cours d'apprentissage adaptatif en biologie médicale et en médecine de laboratoire sont désormais disponibles. Annales de Biologie Clinique. 2023;81(2):109-110. doi:10.1684/abc.2023.1792 traduit de l'anglais par Bernard Gouget

Recommendations and Guidelines:

Managing the Quality Control of multiple instruments, Tony Badrick* and Jean-Marc Giannoli, Clin Chem Lab Med 2024; 62(3): e62–e64 ; <https://doi.org/10.1515/cclm-2023-0592>; Received June 6, 2023; accepted August 16, 2023; published online August 28, 2023

Editorial: Nader Rifai. Démocratisation de l'enseignement : les cours d'apprentissage adaptatif en biologie médicale et en médecine de laboratoire sont désormais disponibles. Annales de Biologie Clinique. 2023;81(2):109-110. doi:10.1684/abc.2023.1792 traduit de l'anglais par Bernard Gouget

IFCC e-news

April 2023

- B.Gouget, JM. Giannoli, F. Blanchecotte. JIB Paris 2022: Paving the way for sustainable strategies for medical labs p: 28-30

Jan-Feb 2023

- B.Gouget, JM. Giannoli, F. Blanchecotte. JIB Paris 2022: an iconic congress in the iconic City of Lights p 60-65
- S.Stankovic, B.Gouget, JM Giannoli, F. Blanchecotte. Serbian response to a Western Balkan refugee crisis p 66-67
- Gramos Begoli, B.Gouget, JM Giannoli, F. Blanchecotte.. Kosovo – Spotlight on migrants and migration challenges 69-70
- M. Kaplan, B.Gouget, JM Giannoli, F. Blanchecotte. Integrating lab medicine technologies and mobile health services for asylum seekers and refugees



MEXICO FEDERACIÓN NACIONAL DE QUÍMICOS CLÍNICOS (CONAQUIC A.C.) NATIONAL MEETINGS

NATIONAL MEETINGS

<i>Name of the meeting</i>	<i>Date</i>	<i>Topic</i>
LXXIV Ordinary General National Assembly in the city of Puerto Vallarta within the work of the XXIV National Congress for the Analysis of Quality Assurance in the Clinical Laboratory	March 25, 2023	Semi-annual meeting of activities of the board of directors related to the certification of professionals, academic activities, conferences.
LXXXV Ordinary General National Assembly in the City of Mazatlan within the work of the XLV National Congress of Clinical Chemists	September 15, 2023	Semi-annual meeting of activities of the board of directors related to the certification of professionals, academic activities, conferences.
Meetings with college presidents	March 2 and 18, 2023 September 4, 2023	Planning of professional certification and recertification processes
Meetings with college presidents	June 07, 2023	presentation of new institutional platform for affiliation and professional certification processes
Meetings with college presidents	July 10, 2023 August 8, 2023	Presentation of the process for the election of a new vice president
Meetings with National Associations of Clinical Chemistry	February 16 and 24, March 10 April 28, May 19, June, July 2023	Preparation of the first national symposium of clinical laboratory professionals, analyzing the current and future perspective of the clinical laboratory professional aligned with the global strategy of UNE Salud that seeks to increase interdisciplinary collaboration in health care.

EDUCATION

In the period from January 1 to December 31, 2023, 34 academic events were held by the affiliated professional associations endorsed by CONAQUIC, adding to these 70 hours of activities carried out by the Federation itself, representing a total of 1,705 hours. of Continuing Education for the benefit of Clinical Laboratory professionals.

XXIV National Congress for Quality Assurance Analysis in the Clinical Laboratory and Expoquim CONAQUIC 2023. Puerto Vallarta. On-site modality. March 24, 25 and 26, 2023

Different topics related to the Quality Assurance in the clinical laboratory: 32 invited professors; 8 workshops and 21 conferences

45th Anniversary CONAQUIC Academic Celebration Virtual modality

February to September, 2023

Programme of ten keynote lectures on Clinical Laboratory topics

XLV National Congress of Clinical Chemists and Expoquim CONAQUIC 2023. Mazatlan.

On-site modality. September 11 to 16, 2023

Different topics related to the Clinical Laboratory: 69 invited professors; 17 workshops and 40 conferences organized in 10 symposiums

Chemist's Day 2023 Virtual modality November 24 and 25, 2023

Eight keynote lectures in topics of clinical interest to laboratory professionals

REGIONAL MEETINGS

<i>Name of the meeting</i>	<i>Date</i>	<i>Society's contribution for the meeting</i>
Meeting with the representative of IFCC Bioq. Maria del Carmen Pasquel with school presidents	March 25, 2023	learn about the organizational structure and activities of IFCC, promoting rapprochement and communication with IFCC.
First Regional Conference of the Latin American Confederation of Clinical Biochemistry COLABIOCLI	September 15, 2023	Latin American Meeting that was held under the motto of "Thinking about the present and planning the future of Clinical Laboratory professionals in Latin America and the Caribbean



REGIONAL RELATIONS

Member of Confederación Latinoamericana de Bioquímica Clínica COLABIOCLI

INTERNATIONAL RELATIONS

Member of International Federation of Clinical Chemistry and Laboratory Medicine IFCC

ADDITIONAL INFORMATION

During the year, different work meetings of the board of directors are held, each commission in its field of competence with the purpose of carrying out the planning of the different academic events and proposals to improve internal processes and communication with members.



MEXICO COLEGIO NACIONAL DE QUÍMICOS CLÍNICOS EN MEDICINA DE LABORATORIO (CONQUILAB)

NATIONAL MEETINGS

<i>Name of the meeting</i>	<i>Date</i>	<i>Topic</i>
VI CONQUILAB INTERNATIONAL CONGRESS AND TECHNOLOGIC EXPO INNOVATION 2023	May 25th – 27th, 2023. Puebla, Puebla.	Hematology, parasitology, immunology, urinalysis, preanalytical phase, molecular biology, microbiology, genetics, clinical chemistry, microscopy, mycology, quality control.
V CONQUILAB INTERNATIONAL CONGRESS AND TECHNOLOGIC EXPO INNOVATION 2023	October 26th-28th, 2023. Oaxaca, Oaxaca.	Hematology, parasitology, immunology, urinalysis, preanalytical phase, molecular biology, microbiology, genetics, clinical chemistry, microscopy, quality control, professional certification.

REGIONAL MEETINGS

<i>Name of the meeting</i>	<i>Date</i>	<i>Topic</i>
VII Academic Conference on Clinical Lab - Southeast Body of Professionals in Clinical Lab (COPLACS)	November 30 th , 2023.	Academic endorsement Promotion and dissemination
VII State Congress of Clinical Chemists and IV Congress of Quality in the Clinical Laboratory. Durango State Body of Clinical Chemists	November 17 th -19 th , 2023.	Accademic endorsement Promotion and dissemination

REGIONAL ACTIVITIES AND COURSES

<i>Name of the meeting</i>	<i>Date</i>	<i>Topic</i>
Analysis and Interpretation of Blood Chemistry	June 9 th -11 th , 2023	North of Veracruz Body of Clinical Chemists
Pulmonary lophomoniasis in Mexico: what should be done to know an emerging parasite Lophomonas ssp.	July 20 th , 2023	Durango State Body of Clinical Chemists
Diploma course: Integration and Interpretation of Clinical Chemistry	October 2022 – August 2023	Aguascalientes Body of Clinical Chemists
Update lecture series	September 2 nd , 2023	Potosin Body of Chemist Pharmacist Biologists
Master conferences on Microbiology	September 9 th , 2023	National Body of Clinical Chemists in Laboratory Medicine (CONQUILAB)
WBC series and its response in infectious processes	September 23 rd -24 th , 2023	Southeast of Veracruz Body of Clinical Chemists
Selected Metabolism Topics	September 30 th , 2023	National Body of Clinical Chemists in Laboratory Medicine (CONQUILAB)
Comprehensive diploma course in the clinical laboratory and its relationship in inflammatory processes	January – September, 2023	Nayarit State Body of Chemists
Clinical parasitology	August - October 2023	Izucar de Matamoros Body of Clinical Chemists
Basic Hematology	October 13 th -15 th , 2023	South of Jalisco Body of Chemist Pharmacist Biologists
Urinalysis quality control	October 20 th -22 nd , 2023	North of Veracruz Body of Clinical Chemists
Processes, Standardization, implementation, and traceability of HbA1	December 1 st -3 rd , 2023	North of Veracruz Body of Clinical Chemists



2 nd academic and professional conference in laboratory medicine. Commemoration of Chemist's Day 2023.	December 8 th -9 th , 2023	CONQUILAB Southeast Branch
Cycle of conferences on continuous improvement and updating in the clinical analysis laboratory	August – December, 2023	South of Jalisco Body of Chemist Pharmacist Biologists

REGIONAL RELATIONS

Mexican Association of Pathologists AC
Mexican Council of Certification for Professionals in Chemical Pharmaceutical Sciences (COMCECF)
National Association of Faculties and Schools of Chemistry (ANFEQUI, Mexico)
Autonomous University of Guadalajara, Campus Tabasco (UAG Tabasco)
Autonomous University of Chiapas (UNACH)
Meritorious Autonomous University of Puebla (BUAP)
Autonomous University of Baja California (UABC)

INTERNATIONAL RELATIONS

IFCC

Infobioquimica – Radio El Microscopio Radio / Podcast

Latin America Confederation of Clinical Biochemistry (COLABIOCLI)

Latin American Society for Forensic Genetics (SLAGF)

Assist. Prof. Adriana Beltran, PhD

University of North Carolina at Chapel Hill School of Medicine

MC. Aurora Muñoz Pedraza

CLSI Volunteer

Spanish Society of Laboratory Medicine.

Alba Cecilia Garzón García, PhD

ACG's Scientific Director

IFCC WG-IANT Member.

Dr. Khosrow Adeli

IFCC past President

Jorge Eugenio Vidal Graniel PhD

Associate Professor of Cell and Molecular Biology at University of Mississippi Medical Center.

ADDITIONAL INFORMATION

CONQUILAB is working since 2023 to consolidate and launch the following commissions within our group throughout Mexico:

- International affairs
- Social welfare
- Professional social service
- Scientific dissemination
- Professional experts
- Student's chapters

- Honor and Justice
- The Expanded Council has had quarterly meetings to report, as established in the Statutes, establishing a committee to review the Statutes.

Call and instructions update for 2024 Professional Certification Test in Laboratory Medicine in collaboration with the Mexican Council of Certification for Professionals in Chemical Pharmaceutical Sciences (COMECEF).

Call and instructions update for 2024 Professional Recertification in Laboratory Medicine in collaboration with the Mexican Council of Certification for Professionals in Chemical Pharmaceutical Sciences (COMECEF).



PHILIPPINES

PHILIPPINE COUNCIL FOR QUALITY ASSURANCE IN CLINICAL LABORATORIES (PCQACL)

IFCC RELATIONSHIP

The Philippine Council for Quality Assurance in Clinical Laboratories (PCQACL) continuously strengthens its diplomatic relationship and collaboration with the IFCC for continuing educational activities and development with its regular application to the IFCC Visiting Lecturer Program. With this program, the PCQACL is privileged to invite renowned Speakers in the field of Laboratory Medicine and other relevant medical fields during the PCQACL Annual Convention. Hence, we are so grateful to the IFCC for being able to invite the following IFCC- VLP Speakers for the 20th PCQACL Annual Convention.



Dr. Bernard Gouget, Ph.D, MSc, LL.D.

The IFCC Chair on Committee on Mobile Health and Bioengineering in Laboratory Medicine (C-MHBLM),

Dr. Bernard Gouget has graced with his valuable presence, the PCQACL 20th Annual Convention Opening Ceremonies as the Keynote Speaker addressing over a thousand delegates comprising Pathologists, Medical Technologists, clinical laboratory Supervisors and Managers with his Keynote Message on “Mobile Health as a Disruptive Technology in Healthcare”. As the IFCC Chair on Committee on Mobile Health and Bioengineering in Laboratory Medicine, he is working on the smart technologies and quality management that are transforming the traditional

healthcare system in an all-round way, and making laboratory medicine more convenient, more efficient and personalized for a sustainable development in the digital decade of the 2020s.



Prof. Robert H. Christenson, Ph.D., DABCC, FAACC, FACC

Professor Robert H. Christenson, a Professor in the Department of Pathology and Department of Medical and Research Technology of the University of Maryland School of Medicine. Professor Christenson has also been one of our invited eminent IFCC-VLP Speakers in the 20th PCQACL Annual Scientific plenary sessions. Due to unforeseen situation, Prof. Christenson was not able to physically join the 20th PCQACL Annual Convention. Instead, he was able to do the Workshop on “Evidence-Based

Laboratory Medicine (EBLM) with the able assistance of the Workshop Moderator; Dr. Sarah Jane L. Datay-Lim and the Facilitators; Dr. Gio Dela Cruz, Dr. Katherine Don, and Dr. Louise de



Guzman held on October 12, 2023. The workshop has been focused on using Evidence Based Laboratory Medicine (EBLM) processes for asking the right question, identifying the right study design for finding and collecting relevant evidence, critically appraising the evidence and applying the knowledge. The participants learned how to apply the five A’s of EBLM Medicine: **Ask** the question, **Acquire** the Evidence, **Appraise** the evidence, **Apply** the findings, **Analyze** the outcome to know and appreciate how EBLM can be used to improve everyday practice of Laboratory medicine.

NATIONAL MEETINGS

<i>Name of the meeting</i>	<i>Date</i>	<i>Topic</i>
20 th PCQACL Annual Convention	October 11 - 13, 2023	“ Redefining Global Challenges into Quality Laboratory Standards ”

The Philippine Council for Quality Assurance in Clinical Laboratories (PCQACL) has conducted its **Hybrid 20th Annual Convention** with the team “**Laboratory Transformation in the Digital Age: Personal and Institutional Challenges**” held on October 11-13,2023 at Crowne Plaza Galleria, Ortigas Ave., Quezon City. The online platform was facilitated by the Progressive Productivity Solutions. This event was well attended and participated by more than a thousand delegates from the different clinical laboratories and medical institutions nationwide. An array of scientific lectures, panel discussions, and workshop by renowned and distinguished international and local Speakers are all very informative and relevant to the present time. The presentations have really satisfied and fulfilled the gain in knowledge and learning updates of our convention participants.

The PCQACL 20th Annual Convention started with the Pre-Convention Workshop on Parasitology held on October 10, 2023 (8:00 AM – 5:00 PM) at Crowne Plaza Galleria Hotel was well-attended physically by the participants. The following important topics were presented in the morning sessions: Unraveling Malaria: Basics and Morphology Review, Lecture 2: A different kind of "Crypto": Crytosporidium and other Parasites, Lecture 3: Free-living Amoebae in the Philippines: an untold story. Then, the following topics were presented in the Afternoon sessions: Lecture 4: Important Philippine Parasites, and then followed by an Interactive session of the Speaker with the participants facilitated by the invited Workshop Facilitators. The last session presented was on the topic: Lecture 5: Discovering Parasites in Tissues. The conduct of this Pre-Convention Parasitology Workshop was truly successful as per the given comments/ evaluation of the participants.

The first day of the 3-day main Convention on October 11, 2023 started with the Opening Ceremonies highlighted by the Keynote Address of Dr. Bernard Gouget on “ Mobile Health as a Disruptive Technology in Healthcare ” and this was followed by the morning scientific sessions covering the track on Transformation with Quality on the following presented plenary lecture topics: 1) The Role of Bacteriology Laboratory to Fight Against Antimicrobial Resistance, 2) New Trends in Molecular Diagnostic for infectious diseases. The afternoon scientific sessions in partnership with CAP invited Speakers were the following: 1) Common Deficiencies in CAP Accreditation, 2) Competency Assessment: A Building Block to High-Quality Test Results and Patient Care. Then, the following lecture topics were presented; 1) Impact of quality issues in immunohistochemistry, and 2) Utilization of Artificial intelligence in Anatomic Pathology. Another highlight on the first day of the convention is the PCQACL Best Laboratory Practices Contest participated competitively by two hospitals namely; Veterans Memorial Medical Center presented by Mr. Cyril Juster Barros with the Entry entitled “OPTIMIZING EXCELLENCE: A STREAMLINED LIS IMPLEMENTATION IN THE DEPARTMENT OF PATHOLOGY and Mary Mediatrix Medical Center with the Entry entitled “BEATING THE TINY GIANT: A CALL FOR SAFE ENVIRONMENT presented by Mr. Jhudiel Albert Sabalvarro.

The second day of the convention on October 12, 2023 was the presentation of a half-day Workshop on Evidence-Based Laboratory Medicine (EBLM) by the invited esteemed IFCC – VLP Speaker, Prof. Robert Christenson. In the afternoon session, the panel discussion on the topic “Role of laboratory scientists in CAR T-cell therapy was presented.

Onward to the third day on October 13, 2023 was the track on Challenges in the Digital Age with the panel discussion on the topic “Reflex testing: are we ready?”. This was followed by the plenary lecture on the topic “Challenges in Laboratory Information technology: LIS/HIS integration, EMR and cyber security”. Another partnership lecture with Cap Speaker was presented on the topic “Laboratory Statistical Analysis and Calculations—Helping Your Lab to Succeed”. There were other two plenary lectures presented under transformation block on the following topics” Revisiting Traditional Methods in Hematology” and “Next Generation Algorithms in Hematology”.

This last day of the convention was highlighted with the culminating activities of the 3-day convention and the Closing Ceremonies graced with the presence of the Founders of PCQACL who have been given the Special Recognition Award. The event became even more meaningful and memorable with the heartfelt presence of the PCQACL Founding President, our dear Dr. Tomas P. Maramba, Jr., as the Guest of Honor. Everybody welcomed him with great delight. It was also on this last day of the convention that the winners of the Best Laboratory Practices have been announced to the excited participants. Mr. Cyril Juster Barros of Veterans Memorial Medical Center was the First prize winner, and Mr. Jhudiel Albert Sabalvarro of Mary Mediatrix Medical Center was the Second prize winner.

The PCQACL Continuing Education, Training & Research (CETR) Committee has successfully conducted the Hybrid 20th PCQACL Annual Convention and the virtual presentation was made possible via Zoom App online platform through the technical assistance of our IT Provider (Progressive Productivity Solutions) on the technical issues, queries and concerns of the participants with the guidance and supervision of the PCQACL Committee on Information, Communication & Technology System (ICTS).

EDUCATION

The Committee on Continuing Education, Training & Research of PCQACL has conducted the following Free Webinar in 2023.

<i>Title</i>	<i>Speaker/s</i>	<i>Date</i>	<i>Number of Participants</i>	<i>In Collaboration with Diagnostic Industry Partner</i>
P.O.W.E.R 12 IMMUNOLOGY IN FOCUS: SHEDDING LIGHT ON TORCH TESTING	DR. LIZETTE CARO ALQUIROS	July 20,2023	1,250 participants	Phil. Blue Cross Biotech

The PCQACL Academy also conducted the Online Certificate Training Program on Peripheral Blood Smear: Standardization, Updates, and Morphology Review which started on May 19, 2022 up to May 19, 2023 featuring some of the country’s Best Hematopathologists as follows:

1. Arvin C. Faundo, MD, FPSP - lecture topics: “Start right with a Good Blood Smear” and “Red Blood Cells Disorders”
2. Alejandro E. Arevalo, MD, FPSP – lecture topics: “Lymphocytes, Monocytes, and Plasma Cells”



3. Januario D. Veloso, MD, FPSP, FCAP - lecture topics: “Neutrophils, Eosinophils, and Basophils”
4. Rose Lou Marie C. Agbay, MD, FPSP – lecture topics: “Platelets” and “Tips and Recommendations on Final Report”
5. Janelyn Alexis Dy-Ledesma, MD, FPSP - lecture topic: “Resolving Discrepancies in CBC with the help of Histograms

REGIONAL RELATIONS

Member of Asian Network for Clinical Laboratory Standardization and Harmonization (ANCLS)

Member of Asian - Pacific Federation of Clinical Biochemistry and Laboratory Medicine (APFCB)

PCQACL was a previous Member of Clinical and Laboratory Standards Institute (CLSI) and this has given PCQACL the authority to be the distributor of their books and other documents in the Philippines, procuring of such in bulk and distributing them to facilitate their adoption and implementation by the clinical laboratories.

INTERNATIONAL RELATIONS

The PCQACL is an active member of the International Federation of Clinical Chemistry and Laboratory Medicine (IFCC).

The IFCC-Visiting Lecturer Program has always been requested to provide Speakers / Panel Discussants at the Plenary lectures / Panel discussions of the PCQACL’s Annual Conventions, Seminar-Workshops and other Scientific sessions.

ADDITIONAL INFORMATION

PCQACL Officers and Board of Trustees, Standing Committees and Chairpersons for C.Y. 2023

Officers

President: Paulo Enrico P. Belen, MD, DPSP
 Vice-President: Anacleta P. Valdez, MD, FPSP
 Secretary: Gerrick Joseph C. Dolor, RMT
 Treasurer: Josefina S. Soriano, RMT
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 Immediate Past President: Sarah Jane L. Datay-Lim, MD, FPSP
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Standing Committees and Chairpersons

Committee on Membership: Maximo A. Saavedra, Jr., MD, FPSP
 Committee on Continuing Education, Training & Research: Marissa A. Orillaza, MD, MSCE, FPSP
 Committee on Advocacy & International Relations: Elizabeth Y. Arcellana-Nuqui, MD, FPSP

Committee on Information, Communication & Technology Systems: Rudolph D. Abiba, MD, FPSP

Committee on Finance: Erlinda C. Pijuan, RMT

Committee on Publications & Public Relations: Anacleta P. Valdez, MD, FPSP

Committee on Annual Convention: Rodelio D. Lim, MD, FPSP

Committee on By- Laws & Legislation: Anacleta P. Valdez, MD, FPSP / Atty. Joyce Mendoza

Committee on Nominations & Elections: Aileen Riego-Javier, MD, FPSP

Committee on Awards: Edna May Lasap-Go, MD, FPSP

Committee on Special Projects: Januario D. Veloso, MD,FPSP



ROMANIA

ORDER OF THE BIOCHEMISTS, BIOLOGISTS, CHEMISTS IN ROMANIAN HEALTH SYSTEM (OBBCSSR)

NOTE

The new National Executive Bureau in the structure resulting from the national elections that will be held in the second semester of 2024 will vote the OBBCSSR President elect for the 2024 - 2028 term. The President in office, dr. Constanța Popa, has announce that will submit his candidacy renewal according to the OBBCSSR bylaws provisions. The National General Assembly will also elect the next NRs for both the IFCC and EFLM.

OBBCSSR as Affiliate Member will officially communicate and confirm both to the IFCC and EFLM the names of the persons who will be legally elected in these positions.

NATIONAL MEETINGS

<i>Name of the meeting</i>	<i>Date</i>	<i>Topic</i>
Conference of preventionists (partnership)	March 10-11	Prevention activities in Romania – who, how, with what
Conference Stress, anxiety, depression (partnership)	April 28-29	SAD – Clinical pictures of loneliness
RAML National Conference	June 14-16	personalized approach in diagnostic and monitoring of oncological disease, diagnostic challenges, post-COVID syndrome, quality in laboratory medicine
XXX National Congress of Endocrinology	June 25 – 28	clinical news in relation to the management of endocrine conditions, scientific research in the field and case presentations
Bronchopulmonary cancer conference (partnership)	September 8-9	The complicated medical-socio-economic path of the person with bronchopulmonary cancer
XXIX National Conference of Clinical Hematology and Transfusion Medicine	October 4 – 8	hematological pathologies - diagnosis, therapies, monitoring; bone marrow transplant
XVI National Conference on Microbiology and Epidemiology	November 9-11	management of nosocomial infections, Respiratory infections - evolution after the COVID-19 pandemic, diseases preventable by vaccination



EDUCATION

National events

- courses organized within the congresses of national medical associations
- postgraduate courses organized by the medical faculties and the biology faculties, as well as by the national medical societies
- courses held by the CME providers accredited by OBBCSSR

Regional events

- For the OBBCSSR members enrolled in the EFLM Academy - the online EFLM Syllabus Course and the 4 EFLM Lessons in Immunochemistry with the topics:
 - FERTILITY: the role of Anti Mullerian Hormone 11 April 2023
 - ANEMIA 27 June 2023
 - HEPATIC FIBROSIS: the role of laboratory biomarkers in diagnosis and monitoring 26 September 2023
 - CORONARY ARTERY DISEASE predicting the development in apparently healthy individuals: the role of Lp(a) 6 December 2023
- EFLM webinars (starting on January - Evidence-based laboratory medicine December - Biomarkers of sepsis: procalcitonin and more)

International events

- OBBCSSR also promoted in 2023 through its official FB page the IFCC scientific CPD activities, such as:
 - the educational and managerial skills development activities organized by the IFCC EMD committees and WGs (i.e. WG LEPS, C-EBLM, C-KD, C-CB)
 - webinars and distance learning materials provided through the IFCC eAcademy (i.e. "Interference of high sensitivity troponin assay"- October 10, "Biomarqueurs sanguins diagnostiques du traumatisme crânien léger – actualités et perspectives" – 30th May, "Evidence-based laboratory medicine – systematic review and meta-analysis"- 19th April, attended online live/recorded on demand)

REGIONAL MEETINGS

<i>Name of the meeting</i>	<i>Date</i>	<i>Society's contribution for the meeting</i>
EFLM Congress (Rome, Italy)	May 21 -25	Poster " CLINICAL UTILITY OF HEMATOLOGICAL AND BIOCHEMICAL BIOMARKERS IN MULTIPLE MYELOMA - A CASE STUDY"
XXX Meeting of the Balkan Clinical Laboratory Federation (Montenegro)	September 27 -30	Oral presentation "Various types of urinary casts and their diagnostic significance – manual microscopic vs automatic method – an integrated view"

REGIONAL RELATIONS

- OBBCSSR is an EFLM affiliated member, in which capacity it mediated and promoted EFLM initiatives (eg Green and sustainable medical laboratories) and scientific events organized by EFLM, as well as EFLM e-Academy activities.
- Sr med..biochem.EuuSpLM Dorina Popa, attended in person as OBBCSSR NR for EFLM the EUROMEDLAB EFLM Congress held in Rome on May 21-25, as well as at the XVII EFLM General Assembly of (May, Rome). She was also confirmed by the President of the OBBCSSR, Dr. Constanța Popa, as the contact person and officer to act as acting NR within TF-Green Labs until the national elections in the 2nd semester of 2024.
- Dr.chem. .EuSpLM Georgeta Sorescu, confirmed in 2022 by Prof. Michel Langlois, Chair of the EFLM Science Committee, as a Corresponding Member within the EFLM Working Group "Harmonisation" (WG-H), contributed to the development and implementation of the CPECS system, wich is currently applied starting the EFLM Congress in May 2023.
- The Chair of the Accreditation and Endorsements Commission of OBBCSSR, EuSpLM Dr Adina Elena Stanciu, senior research scientist and senior medical chemist, is a Full Member (only for the WG – LMCP) in the WG "Laboratory Medicine Credit Points" (WG-LMCP).
- Both NR and the president of the OBBCSSR have maintained a permanent contact through online correspondence regarding the specific activities of the WGs and TFs of the EFLM and by participating in the SM received from the EFLM (ex Survey on the potential emissions and end-of-life of medical technologies containing PFAS)
- OBBCSSR has sent to the Chair of TFG Urinalysis, Prof.Tim Kouri, proposed amendment / addition / update for the EFLM Urineanalysis Guideline
- EFLM Academy presentation and of the benefits to the OBBCSSR members and mediatization of the EuroLab Newsletter content
- OBBCSSR has reconfirmed to the EFLM and the IFCC Executive Board the compliance with all the statutory decisions and recommendations of the clinical chemistry and laboratory medicine federations to which OBBCSSR is an Affiliate Member, on the occasion of receiving the IFCC's decision to confirm Prof. Tomris Ozben, President of EFLM, as a Regional Representative at IFCC for period March 2022-December 2023

INTERNATIONAL RELATIONS

- OBBCSSR permanently promoted for its members the series of webinars organized by IFCC and was actively involved in this post-academic CPD activity by supporting on September 11, 2023 the webinar with the theme "Laboratory medicine - a critical role of patients in the diagnosis and disease monitoring", webinar that recorded over 4,000 of attendees
- OBBCSSR NR for the EFLM , Sr. med..biochem.EuuSpLM Dorina Popa, who attended in person the EUROMEDLAB Congress in Rome (May 21-25) held talks with both the IFCC acting President, Prof. Khosrow Adeli , as well as with the IFCC President-elect, Prof. Tomris Ozben, having the agreement and authorization of the OBBCSSR President and IFCC NR, Dr. Constanța Popa. She also met Dr Alexander Haliassos, IFCC EB member, in his capacity as an EQAS professional. OBBCSSR NR for the IFCC, Dr. Constanța Popa, was constantly concerned with the online mediatisation of the IFCC's activities for OBBCSSR members and to increase the visibility of specialists in clinical chemistry and laboratory medicine. She was also directly involved in these actions by recording a podcast presented online within the promotional events of the activities



occasioned by Global Med Lab Week (April 23-29). 2023. The representative podcasts for the professional activity and achievements of our colleagues from around the world were also promoted on the FB page of OBBCSSR.

ADDITIONAL INFORMATION

As specified by the Note to "any other relevant information useful for IFCC relationship" in the 2nd semester of 2024, after the National General Assembly, OBBCSSR will inform both IFCC and EFLM on:

- The name of the President-elect who will become the OBBCSSR President in office and legal representative of the Professional Body in the relationship with the State authorities and in external relations according to the applicable regulations
- The names of the National Representatives at the IFCC and EFLM, respectively, elected for the next term

Both the OBBCSSR EB as well as the NRs of our NS who will be elected for a new term will continue the permanent collaboration with IFCC for the future of the professions of specialists in clinical chemistry and laboratory medicine and for increasing patient safety.



SERBIA SERBIAN SOCIETY FOR CLINICAL LABORATORY MEDICINE AND SCIENCE (SCLM)

NATIONAL MEETINGS

<i>Name of the meeting</i>	<i>Date</i>	<i>Topic</i>
18th Conference of the Scientific and Technical Committee of Accredited Laboratories	June 09, 2023, Belgrade	Quality control in the entire laboratory process is the basis of the reliability of laboratory testing. The Society of Medical Biochemists of Serbia (SMBS), knowing the importance of maintaining continuous education, has traditionally organized the First Category Seminar, the 18th Conference of the Scientific and Technical Committee of Accredited Laboratories- The seminar was held within the framework of the Unified Association of Serbia for Quality (JUSK),
Society of medical biochemists of Serbia, "Professor Ivan Berkeš Scientific Fund" this year, diplomas and monetary awards were presented on November 4 at the opening of the IV TMB CONGRESS – Cardiovascular risk factors - diagnostic challenges and importance The laureates of the Scientific Fund »Professor Ivan Berkeš in 2023 are: MINJA DERIKONJIĆ (Master of Pharmacy – Medical Biochemist) and NASTASIJA ANĐELKOVIĆ (Master of Pharmacy)	November 04, 2023, Belgrade	Appreciating the work of his teacher and eminent expert, the Society of Medical Biochemists of Yugoslavia, (today the Society of Medical Biochemists of Serbia) after the death of Prof. Dr. Ivan Berkeš in 1997, in his honor, the Scientific Fund »Professor Ivan Berkeš« was formed and established the »Annual Scientific Conference« dedicated to the life and work of Professor Ivan Berkeš at the suggestion and organization of Prof. Dr. Nada Majkić-Singh. Annual awards (diplomas and cash prizes) are awarded from the Fund to Pharmacy students, which we are doing for the twenty-sixth time this year.

EDUCATION

The main objectives of the program are set in relation to familiarity with terminology and concepts related to quality assurance of the pre-analytical, analytical and post-analytical phases of the work process in a medical biochemical laboratory, familiarization with the process of quality control and management in laboratories specific to the primary, secondary and tertiary level of health care, understanding internal and external quality control procedures, as well as testing the laboratory's capabilities, familiarization with the challenges and potential of new diagnostic tools in molecular diagnostics, familiarization with the basics of implementation and management of Point-of-Care testing in routine laboratory and non-laboratory practice, and familiarization with the concept of risk management in the laboratory process.



Lecturers and chairpersons of the 18th conference of NTK-Accredited Laboratories (from left to right): Dr Iva Perović-Blagojević, Ass. Prof. Neda Milinković, Jasna Bjelanović, Dr Danijela Ristovski Kornic, Ass. Prof. Snežana Jovičić, Prof. dr Nada Majkić Singh, Dr Vera Lukić, Prof. dr Svetlana Ignjatović, Prof. dr Ana Ninić, Ivana Vujatov and Bojana Pavlović.

REGIONAL MEETINGS

<i>Name of the meeting</i>	<i>Date</i>	<i>Society's contribution for the meeting</i>
30 th Meeting of Balkan Clinical Laboratory Federation (BCLF2023) and 2 nd Conference of Montenegrin Association for Clinical Chemistry and Laboratory Medicine (MACC)	Herceg Novi, Boka Bay, Montenegro, 27–30.09.2023	It was organized by MACC, under the auspices of International (IFCC) and European (EFLM) Federation of Clinical Chemistry and Laboratory Medicine. Members of the Society of Medical Biochemists of Serbia participate on this Congress with a few lectures.

REGIONAL RELATIONS

Society of Medical Biochemists of Serbia is member of Balkan Clinical Laboratory Federation which members are also: Romania, Bulgaria, Turkey, Greece, Albania, Bosnia and Hercegovina and Montenegro.

Society also has very good cooperation with Societies of Croatia, Slovenia, Italy and Hungary.

INTERNATIONAL RELATIONS

As member of EFLM and IFCC Society of Medical Biochemists of Serbia cooperate with all members of these two Federations.



ADDITIONAL INFORMATION

Marina Pijanovic - National Society Representative in Task Force: Direct-to-Consumer Testing
Iva Perovic Blagojevic - National Society Representative in Task Force: Green and Sustainable Laboratories

Neda Milinkovic - Corresponding member in WG: Accreditation and ISO/CEN standards

Miron Sopic - finished his term as the Chair of the TG: Young Scientists

Snezana Jovicic - EB Secretary; Chair of the WG: Patient Focused Laboratory Medicine, a core member in Task Forces Green and Sustainable Laboratories and Preparation of Labs for Emergencies

WG: Accreditation and ISO/CEN standards (WG-A/ISO)	Neda	MILINKOVIC	Corresponding Member	Serbia	2nd term: 2021-2023
WG: Postanalytical Phase (WG-POST)	Svetlana	IGNJATOVIC	Corresponding Member	Serbia	5 th term: 2021-2023



SPAIN

ASOCIACIÓN ESPAÑOLA DEL LABORATORIO CLÍNICO (AEFA)

NATIONAL MEETINGS

Name of the meeting	Date	Topic
LABCLIN 2023	18 -20 Oct 2023	National Congress of Clinical Analysis (Spain)
XIV REUNIÓN CIENTÍFICA PRESENCIAL 2023	25 Feb 2023	Multidisciplinary approach to human reproduction before and during gestation.
V Jornada profesional del laboratorio clínico	15 Apr 2023	The clinical laboratory at the forefront

EDUCATION

- AEFA 2023 Continuing Education Programme (1564 registered)
- Competence workshop "Pragmatic selection of quality specifications".
- MOOC on internal quality control management
- MOOC on biological liquid analysis
- E-course on red blood cell and platelet disorders
- Academic event with CUBRA (Argentina): "The emergency laboratory, an overview through our experiences".

REGIONAL MEETINGS

Name of the meeting	Date	Society's contribution for the meeting
XIV Jornadas Ibéricas de Análisis Clínicas	3-4 Feb 2024	AEFA contributes to the organisation and selection of speakers with the "Ordem dos farmacêuticos" from Portugal.

1ª Conferencia regional de la confederación latinoamericana de bioquímica clínica	21-22 Nov 2023	AEFA participated in the development of Colabiocli's action plan for the coming year.
ACTUALIZACIÓN SOBRE MARCADORES BIOQUÍMICOS EN EL LABORATORIO CLÍNICO	21 Nov - 12 Dic	AEFA developed this online activity together with the youth group of the Colombian National College of Bacteriology.
Asamblea general extraordinaria de COLABIOCLI en Florianópolis	18 – 21 Jun	AEFA participated in the development of Colabiocli's action plan for the coming year.

REGIONAL RELATIONS

In Spain, AEFA is a member of SOCILAB, with the Spanish regional societies.

AEFA maintains a close collaboration with the clinical analysis section of the Spanish Council of Associations of Pharmacists. Through this relationship the professional conference is carried out.

AEFA collaborates in the elaboration of the PROA plan for the management of antibiotic resistance together with other scientific societies in the Ministry of Health.

AEFA participates in the Spanish pharmaceutical profession as a representative of laboratory pharmacists. In this area, work is being done on the recertification model for clinical laboratory professionals.

INTERNATIONAL RELATIONS

At regional level AEFA is an affiliated partner of EFLM and participates in the Society's clinical laboratory outreach campaigns through its social media during the clinical laboratory week. It also sent a delegation to EUROMEDLAB 2023 in Rome and communicated to our members all the initiatives that were carried out.

AEFA is a full member of COLABIOCLI, we participated in the meetings organised in Florianópolis and Guatemala. We are currently participating in the scientific committee of the next Latin American congress of clinical biochemistry. Videos have been produced to support the Quality in Health week and we have collaborated with several national entities in the promotion of youth groups. AEFA has also collaborated with the College of Biological Chemists of Guatemala, supporting the development of its external quality control programme.

AEFA has been collaborating for years with the Ordem dos Farmacêuticos de Portugal, supporting the training of clinical laboratory pharmacists in Portugal and jointly preparing the Iberian conference to be held on 3 and 4 February.

AEFA is a partner together with representatives from Portugal, Belgium and France of the EU-PLGM, within this Society, which seeks the recognition of the speciality in clinical analysis at the European Union level.

ADDITIONAL INFORMATION

- AEFA has published the book: *Tras las huellas del diagnóstico, casos clínicos de la medicina de laboratorio.*
- We maintain active social networks on Facebook, Twitter and Instagram and have set up a Youtube channel to improve the dissemination of video content.

- AEFA has an external quality control programme (PSEC) and participates jointly with SEQC, AEBM and SEHH in the development of minimum consensus specifications through the interdisciplinary Expert Committee on Quality Specifications.
- The "Revista de medicina de laboratorio", a scientific journal, is published quarterly.



SRI LANKA COLLEGE OF CHEMICAL PATHOLOGISTS OF SRI LANKA (CCPSL)



The College of Chemical Pathologists of Sri Lanka (CCPSL) organized a variety of engaging activities throughout the year 2023, showcasing a blend of online and hybrid events. These activities comprised workshops, webinars, conferences, journal clubs, and case discussions, providing a comprehensive platform for knowledge exchange.

One of the major highlights of the year was the 8th Annual Academic Session, which took place at the Grand Kandyan Hotel in Kandy, Sri Lanka, from July 14th to 15th, 2023 under the auspicious of IFCC and APFCB as well as participation of IFCC VLP speakers. Prior to the conference, a pre-congress workshop on Front-End Laboratory Automation and Middleware was conducted on June 23rd, 2023. The esteemed Prof. Ken Sikaris served as the orator for the conference, and the event featured renowned international guest speakers such as Prof. Tony Badrick, Prof. Samuel Vasikaran, Dr. John Burnett, Dr. Rajeev Srivastava and Prof. Khosrow Adeli, Former IFCC president along with other distinguished national speakers.

With a turnout of more than 300 delegates, the Scientific Program of the conference encompassed 20 sessions with over 31 speakers, 40 posters, and 12 presentations. The sessions covered diverse topics including laboratory management, inborn errors of metabolism, autoimmune and neuroimmune markers, cancer molecular markers and their application in clinical practice. Special emphasis was placed on quality assurance in the total testing process.

The exhibition court featured booths from esteemed collaborators such as Roche, Siemens, Snibe, Abbott, Beckman, and Randox a few to name.

The conference concluded with the announcement of Poster Session Awards, recognizing the outstanding contributions with six prizes awarded for the best three posters and best three oral presentations. The event served as a comprehensive platform for professionals to exchange knowledge, discuss advancements, and foster collaborations within the field of Chemical Pathology.

NATIONAL MEETINGS

<i>Name of the meeting</i>	<i>Date</i>	<i>Topic</i>
8th Annual Academic Sessions 2023” of College of Chemical Pathologist of Sri Lanka Grand Kandyan Hotel, Kandy, Sri Lanka.	14/7/2023 - 15/7/2023	The theme was “Advancing through challenges” The conference organized by the college was a resounding success, attracting a wide range of professionals in the field of Chemical Pathology. There were 75 participants in the main academic program and 233 participants in the Medical Laboratory Science program.
Pre-congress Workshop-CCPSL AAS 2023	23/6/2023	Front End Laboratory Automation and Middleware



EDUCATION

Webinars organized by the CCPSL

- “Guidance to patients with raised triglycerides” on 18.12.2023
- “Preanalytical and analytical pitfalls of the organic acid assay” on 1.12.2023
- “Parenteral Nutrition: Biochemical monitoring and metabolic complications” on 28th August 2023
- “Evaluation of liver biochemistry” on 12th May 2023
- “Critical appraisal of a journal article” on 4th May 2023
- “Case based approach for diagnosis of pleural diseases” on 24.03.2023

Case discussions organized by the CCPSL

- “Case discussion in Multifarious Cushing lessons” on 19.5.2023.
- “Case discussion in Chemical Pathology on case series on abnormal PTH level” on 31.8.2023
- “Case discussion in Chemical Pathology on hirsutism” on 17.03.2023.
- “Case discussion in Chemical Pathology on unmasking the hormonal maze: navigating congenital adrenal hyperplasia” on 27.10.2023.
- Case discussion in Chemical Pathology on vitamins” on 21.4.2023.

Conducted a SLMA monthly clinical meeting in collaboration with the College of Chemical Pathologists of Sri Lanka on “Unravelling the mysteries of hypercalcaemia; role of on 14th November 2023.

Journal clubs organized by the CCPSL

<i>Date</i>	<i>Title</i>
10.08.2023	Original Article; Short-Term and Long-Term Effects of Levetiracetam Monotherapy on Homocysteine Metabolism in Children with Epilepsy: A Prospective Study
07.09.203	Variations in Lipid Profile during Critical Illness
12.10.2023	Original Article; Glycated Albumin for the Diagnosis of Diabetes in IS Adults



23.11.2023	Performance Evaluation of Cardiac Troponin I Assay: A Comparison between the Point-of-care Testing Radiometer AQT90 FLEX and the Central Laboratory Siemens Advia Centaur Analyzer
21.12.2023	Multiple Cardiac Biomarkers to Improve Prediction of Cardiovascular Events: Findings from the Generation Scotland Scottish Family Health Study

Oral Presentation Competition CCPSL AAS 2023 was held in June 2023

Arranged a mock practical exam for MD trainees in Chemical Pathology in December 2023

REGIONAL MEETINGS

<i>Name of the meeting</i>	<i>Date</i>	<i>Society's contribution for the meeting</i>
Provincial MLT Awareness Workshop-North Central Province	25/10/2023	The theme was "Navigating Challenge: Empowering Laboratories with Knowledge". Five resource persons covered key areas which were beneficial for the Medical Laboratory Technologists.
Provincial MLT Awareness Workshop- Eastern Province	5/12/2023	The theme was "Navigating Challenge: Empowering Laboratories with Knowledge". Five resource persons covered key areas which were beneficial for the Medical Laboratory Technologists.

REGIONAL RELATIONS

International Symposium on Immunoassay was held on 9th December 2023 in Sri Lanka

INTERNATIONAL RELATIONS

- International Symposium on Immunoassay was organized by Snibe on 9th December 2023 at Marino Beach Hotel.
- RIQAS seminar was organized by the Sunshine Pvt Ltd on 5th October 2023 at Marino Beach Colombo.
- Dr. Ganga Withana Pathirana, Dr Thathsarani Vithana Pathirana and Dr Thushara Heewageegana's symposium titled "The role of the Chemical Pathology Laboratory in Gastro-Intestinal Disorders" was accepted for 17th Asia-Pacific Congress of Clinical Biochemistry and Laboratory Medicine, APFCB 2024
- Dr Siddiq Ozaal won the second prize for "A diagnostic dilemma in a female presented with hypercalcemia with a parathyroid and pancreatic tumor" and Dr Hiruni Amarasekara won the third prize for "A case of L-2 hydroxyglutaric aciduria" at the APFCB case contest.

ADDITIONAL INFORMATION

The College of Chemical Pathologists of Sri Lanka expresses its sincere hope for continued support from the IFCC Abbott Visiting Lecturer Programme in the future. The collaboration with IFCC VLP has been instrumental in the success of the annual sessions, and the college believes that further support would strengthen its ability to provide high-quality education and professional development opportunities in the field of Chemical Pathology. The college is eager to continue working with the IFCC VLP to promote excellence and advancement in the field.

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